



Gulf Coast Communities and the Fabrication and Shipbuilding Industry: A Comparative Community Study

Volume III: Technical Papers



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Volume III: Technical Papers

Editors

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LIST OF ACRONYMS

AAPA	American Association of Port Authorities
ABC	Associated Builders and Contractors
ABS	American Bureau of Shipping
ABSD	advanced base sectional drydock
ADDSCO	Alabama Drydock and Shipbuilding Company
AEWR	Adverse Effect Wage Rate
AFL-CIO	American Federation of Labor-Congress of Industrial Organizations
AHTS	anchor handling tug supply vessel
AIDT	Alabama Industrial Development Training
AmFELS	American Far East Levingston Shipbuilding
ASIB	Active Shipbuilding Industrial Base
ATC	Applied Technology Center [founded in 1976 as the Pascagoula Vocational Technical Center]
BEA	Bureau of Economic Analysis, U.S. Department of Commerce
BIP	Border Industrialization Program
BISD	Brownsville Independent School District
BLS	Bureau of Labor Statistics, U.S. Department of Labor
BOE	barrels of oil equivalent
BOEM	Bureau of Ocean Energy Management, U.S. Department of the Interior
BP	formerly British Petroleum
BRAC	Base Realignment and Closure Program, U.S. Navy
BXA	Bureau of Export Administration
CAA	Community Action Agency
CBI	Chicago Bridge and Iron
CCAD	Corpus Christi Army Depot
CCMPO	Corpus Christi Metropolitan Planning Organization
CDBG	Community Development Block Grant, a program of the U.S. Department of Housing and Urban Development
CDP	Census Designated Place
CEDS	Community Economic Development Scheme
CISD	Consolidated Independent School District
CLEAR	Consolidated Land, Energy, and Aquatic Resources Act of 2010
CMC	Chet Morrison Contractors
CNC	computer numerically controlled
COLA	cost of living adjustment
COO	Chief Operating Officer
CPI	Consumer Price Index
DOC	Department of Corrections
DOE	Department of Energy
DOL	Department of Labor
DP	dynamic positioning
DPC	Defense Plant Corporation
DWT	dead weight ton
E&P	exploration and production
EADS	European Aeronautic Defence and Space Company

ECO	Edison Chouest Offshore
EDA	Economic Development Administration, U.S. Department of Commerce
EEZ	Exclusive Economic Zone
EPA	Environmental Protection Agency
ESL	English as a Second Language
ETPM	Entrepose Pour les Travaux Petroliers et Maritimes [Entrepose for Petroleum and Maritime Works]; ETPM-USA is this French company's U.S. subsidiary
FEMA	Federal Emergency Management Agency, U.S. Department of Homeland Security
FEPC	Fair Employment Practices Committee
FERC	Federal Energy Regulatory Commission
FPS	floating production system
FPSO	floating production storage and offloading
FSV	Fast Supply Vessel
FTZ	Foreign Trade Zone
GAP	Growth and Prosperity Act of 2000 [State of Mississippi]
GED	General Education Certificate or Certification
GO Zone	Gulf Opportunity Zone [created by the Gulf Opportunity Zone Act of 2005]
GPS	Global Positioning System
GSSC	Gulf State Shipbuilder's Consortium
H-2B	Type of U.S. non-immigrant visa
HR	Human Resources
HUD	Department of Housing and Urban Development
IADC	International Association of Drilling Contractors
ICAF	Industrial College of the Armed Forces
ICE	Immigration and Customs Enforcement, U.S. Department of Homeland Security
IMCA	International Marine Contractors Association
INA	Immigration and Nationality Act of 1952
ISD	Independent School District
ITF	International Transportation Federation
IUMSWA	Industrial Union of Marine and Shipbuilding Workers
JCEDF	Jackson County [Mississippi] Economic Development Foundation
LASH	Lighter Aboard Ships
LCT	Landing Craft Tank
LCVP	Landing Craft Vehicle Personnel carrier
LDS	Latter-Day Saints
LHWC	Longshoreman's and Harbor Workers Compensation
LHWCA	Longshore and Harbor Workers' Compensation Act of 1927
LLC	Limited Liability Company
LMA	Labor Market Area
LMPC	Lower Mississippi Port Cluster
LNG	liquefied natural gas
LOOP	Louisiana Offshore Oil Port
LPG	liquefied petroleum gas
MARAD	Maritime Administration, U.S. Department of Transportation
MBFC	Mississippi Business Finance Corporation
MDA	Mississippi Development Authority
MDOC	Mississippi Department of Corrections

MEP	Manufacturing Extension Partnership [affiliated with the Mississippi Technical Alliance]
MGCCC	Mississippi Gulf Coast Community College
MMEIA	Mississippi Major Economic Impact Authority
MMS	Minerals Management Service, U.S. Department of the Interior [now the Bureau of Ocean Energy Management]
MODU	mobile offshore drilling units
MPO	Metropolitan Planning Organization
MSA	Metropolitan Statistical Area
MSB	major shipbuilding base
NAFTA	North American Free Trade Agreement
NAICS	North American Industry Classification System
NAS	North American Shipbuilding
NASA	National Aeronautics and Space Administration
NCCER	National Center for Construction Education and Research
NED	National Economic Development
NIOSH	National Institute for Occupational Safety and Health
NLCD	National Land Cover Database
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOIA	National Ocean Industries Association
NSRP	National Shipbuilding Research Program
OCLSA	Outer Continental Shelf Lands Act of 1953
OCS	Outer Continental Shelf
OES	Occupational Employment Statistics
OHS	occupational health and safety
OJT	on the job training
OMB	Office of Management and Budget
OPA	Oil Pollution Act of 1990
OSHA	Occupational Safety and Health Administration, U.S. Department of Labor; also the Occupational Safety and Health Act of 1970
OSV	offshore service vessel
OTA	Office of Technology Assessment, U.S. Congress
P&G	Principles and Guidelines, Water Resource Council
RO-RO	Roll-on/Roll-off vessels
ROV	remotely-operated [underwater] vehicle
SCIA	South Central Industrial Association
SCPDC	South Central Planning and Development Commission
SD	School District
SHARP	Safety and Health Achievement Recognition Program [administered by OSHA]
SIC	Standard Industrial Classification
SLEC	South Louisiana Economic Council
TDI	Texas Drydock, Inc.
TEDA	Terrebonne Economic Development Association
TEU	twenty-foot equivalent unit
TLP	tension leg platform
TOPS	Tuition Opportunity Program for Students [state-funded Louisiana scholarship]

	program]
TSA	Transportation Security Administration
TSTC	Texas State Technical College
TWC	Texas Workforce Commission
TWIC	Transportation Worker Identification Credential
ULCC	ultra large crude carrier
USACE	U.S. Army Corps of Engineers
USCIS	U.S. Citizenship and Immigration Services
USEPA	U.S. Environmental Protection Agency
USW	United Steel Workers
UTB-TSC	University of Texas at Brownsville and Texas Southmost College
VLCC	very large crude carrier
VPP	Voluntary Protection Program [administered by OSHA]
WC	Workers' Compensation system [federal insurance fund]
WIA	Workforce Investment Act of 1998
WIN	Workforce Investment Network
WIRED	Workforce Innovations in Regional Economic Development [a U.S. Department of Labor program]
WRDA	Water Resources Development Act of 1986
YFD	yard floating drydock

PREFACE

The fabrication and shipbuilding enterprises in the Gulf of Mexico are unique. Though some date back more than a century, and others were established to support wartime expansion, many were born as a local response to the development of offshore petroleum in the Gulf and still rely on that niche market. Like the offshore industry that it serves, shipbuilding and fabrication for this market has evolved into an international industry, bucking a general decades-long trend in the United States of steady decline of heavy industries in the face of globalization.

At the same time, the shipbuilding and fabrication industries concentrate specific offshore petroleum industry-related social and economic effects in particular towns and cities along the Gulf Coast. They are responsible for the lion's share of the employment generated by the offshore oil and gas industry and, for decades, have anchored and stimulated the growth of many coastal communities. Consequently, they have shaped the physical attributes, populations, and fiscal, social, and economic systems of these communities.

This study was designed to describe the shipbuilding and fabrication industries in the Gulf of Mexico region, their geographic distribution, variation in their size and function, their trends and dynamics, the services they provide, and their labor demands and how they meet them. It brought together historical, demographic, and ethnographic data collection and analyses to define the industry and explore the evolution of specific sites where petroleum-related shipbuilding and fabrication occurs, changes over time and space, and economic linkages.

This report focuses on the local significance of these industries, noting their similarities and differences in relation to the U.S. and global shipbuilding industry, and on their specific consequences to the region. Historical data provide a broad view and make it possible to track changes in the industries and their impacts. Demographic data address key community socioeconomic variables such as population size, age, household income, racial and ethnic composition, educational attainment, housing, employment, and earnings and, where possible, link those to the industries. Ethnographic data reveal community perspectives on the industries and provide local specificity. Together these data offer a look at the interactions between the communities and the fabrication and shipbuilding industries, identifying and analyzing the benefits, such as job creation, and the burdens, such as infrastructure demand, that these industries have placed on their host communities.

This study was conducted between 2006 and 2009 and led by researchers from the University of Houston Center for Public History and the University of Arizona Bureau of Applied Research in Anthropology. It brought together historians, a political scientist, an economist, and anthropologists. The historians, led by Dr. Tyler Priest of the University of Houston, included Dr. Jason Theriot, Jamie Christy, Dr. Sonia Hernandez, and Dr. Paul Wilson. They were supported by Dr. Joshua Stockley, a political scientist, and Dr. John Lajaunie, an economist, both of whom were at Nicholls State University in Thibodaux, Louisiana when the study began. The anthropologists were led by Drs. Diane Austin and Tom McGuire of the University of Arizona and included graduate students Jacob Campbell, Rebecca Crosthwait, Ben McMahan, Lauren Penney, Victoria Phaneuf, Preetam Prakash, Lucero Radonic, and Sarah Raskin. They were assisted in the field by undergraduates Irene Angelov, Terez Banks, and Heather Gallivan, and were supported by Kevin Bullets, Britny Delp, Samantha Herr, Gigi Owen, Monica Voge, and Dr. Drexel Woodson.

The first volume of this report provides a historical overview of Gulf Coast shipbuilding and fabrication. It then presents a model designed to explore the statistical relationships among

various economic and social measures for each of the seven communities highlighted in the study and, specifically, to determine whether the selected variables measure the relationship between the fabrication industry and the well-being of the community. It examines whether a statistical model can consistently capture the impact of these industry segments in such a way as to support a forward-looking forecast of the potential impact of changes in the industries on the study communities.

The second volume is devoted to detailed descriptions of the seven communities selected for this study. From east to west, these include: (1) south Mobile County, Alabama; (2) southeast Jackson County, Mississippi; (3) Lafourche and Terrebonne parishes, Louisiana; (4) east St. Mary Parish, Louisiana; (5) Port Arthur and Orange, within the Golden Triangle of southeast Texas; (6) Corpus Christi and Ingleside, within the Coastal Bend of Texas; and (7) Brownsville and Port Isabel of Cameron County, Texas. The descriptions include past growth and development, community organization and infrastructure, and economic and social conditions that existed in 2007 and 2008. Each description discusses community-specific dynamics related to fabrication and shipbuilding and their relationship to offshore petroleum development. The community descriptions also address workforce issues, examining recruitment, education and training, and retention. The community descriptions are supplemented by appendices containing detailed demographic data and discussions of those data.

The third and final volume presents a series of analytical chapters addressing the geography of the industry; labor issues; business startup and organization; the configuration of jobs and responsibilities on a yard; community, economic, and workforce development; risk; and the effects of hurricanes on the industry. These chapters draw primarily from the rich ethnographic data gathered during this study to explore common themes that cut across the industries and study communities (see also Preface to Volume III).

This study has been framed by disasters. It was initially conceived in 2005 but was put on hold when the devastation caused by Hurricanes Katrina and Rita affected people and organizations across the Gulf Coast, disrupting the operations of the Gulf of Mexico regional office of what was then the U.S. Minerals Management Service (now the Bureau of Ocean Energy Management) as well as the University of Houston and Nicholls State University. Fieldwork began in 2007 and was underway in 2008 when Hurricanes Dolly, Gustav, and Ike struck the Gulf Coast, ensuring that none of the communities that were the focus of this research were spared. Fieldwork for the study was completed in 2009 and the report was being completed when, on April 20, 2010, the *Deepwater Horizon* drilling rig exploded in the Gulf of Mexico, about 40 miles southeast of the Louisiana coast. The study's principal investigators and several of the graduate students went to work almost immediately to gather data about the impacts of that disaster on Gulf Coast communities and to share information and perspectives on the region and the industry with those seeking to understand the disaster, its causes, and its effects. Work on this report was resumed in late 2011. Though efforts were made to update sections of the community profiles, it was not possible to revisit all the study communities and participants or to gather 2010 census data and redo the demographic analyses; that work will remain for a future study.

PREFACE

The first two volumes of this report address temporal and spatial differences in the shipbuilding and fabrication industry across the Gulf of Mexico. This volume explores commonalities, issues that in one way or another affect all the communities we studied. The first chapter endeavors to characterize “oil” ports, locales where upstream and downstream activities meet. While such sites differ in their geophysical characteristics and their primary foci of activities—some are nodes for transporting petroleum and its products to and from refineries, some are supporting and supplying offshore exploration and production—the commonality is the adaptability of various industry segments to the constraints at hand. Chapter 2 deals with the problem confronting all communities in our study region: finding, training, and retaining workers. It describes the strategies used by shipbuilding and fabrication companies to meet these tasks, including the recruitment of authorized foreign labor. The third chapter focuses on policies and practices at local, state, and national levels for economic, community, and workforce development. Two case studies, of Louisiana and Mississippi, illustrate the strategies—and tensions—of such developments. The next two chapters examine the business of owning and operating shipbuilding and fabrication yards along the coast. Chapter 4 traces the vagaries through time of small and medium yards and their owners, from the downturn in the mid-1980s to the present. Chapter 5 dissects the production processes characteristic of medium and large yards, providing a composite picture of what happens in training facilities, on the yard floor, in the engineering department, and in the offices of management and human resources. The subsequent chapter extends the examination of the workplace environment with a detailed examination of industrial risks, worker safety programs, and rules and regulations concerning insurance. It highlights the many complicating factors faced by both workers and employers in implementing these rules, regulations, and safety programs. The final chapter investigates another facet of risk: hurricanes. During the study period, virtually all of our communities were impacted by one of three hurricanes—Dolly, Gustav, or Ike—and this chapter details how companies and communities responded both to the disruptions caused by storms and the opportunities that recovery and rebuilding provided.

This volume’s chapters are grounded in the histories and ethnographies of the communities we studied. Taken together, the chapters flesh out the complex, interlocking factors that characterize relationships across the Gulf Coast between the shipbuilding and fabrication industry and the communities with which the industry interacts. The particulars of these relationships vary from place to place, but shipbuilding/fabrication companies and communities face similar challenges and have similar prospects.

Tom McGuire
Tucson, Arizona
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Special thanks to the men and women who work in fabrication and shipbuilding across the Gulf of Mexico region. These individuals perform difficult and sometimes dangerous tasks, often in extreme heat and under considerable time pressures, to ensure the readiness of the rigs, platforms, and vessels needed to extract and transport oil and gas from the U.S. outer continental shelf, as well as the myriad other tasks to which the vessels they construct are assigned. This study would not have been possible without the participation of hundreds of individuals in the fabrication and shipbuilding industry and in the seven study communities who willingly shared their time, knowledge, and perspectives with members of the research team. Because most of them were promised anonymity, we cannot identify them by name. However, their contributions have been critical to the success of this effort.

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1. PORTS AND THE GEOGRAPHY OF THE INDUSTRY

1.1. INTRODUCTION

In a number of the ports along the Gulf of Mexico, upstream offshore oil and gas activities are the primary drivers of the social, economic, and political landscapes. We have some understanding of how ports and communities respond to cycles in the industry, how those cycles may affect segments of the industry differentially, how ports servicing expensive deepwater exploration and production may have quite different pulses than those building for and supplying the shallow shelf. In this study of the impacts of fabrication and shipbuilding on coastal communities, however, we studied locales where upstream oil and gas activities are not the only, or even the dominant shapers of the social landscape. We selected communities where oil-related shipbuilding and fabrication sectors are significant, but not the only players. Some, such as Pascagoula, have major rig fabricators, but a naval yard as well, a yard whose pulse is set by congressional appropriations and presidential directives, not by the supply and demand for oil. Others, such as Brownsville, attend closely to the supply and demand for steel and scrap metal in manufacturing plants across the border. Others have been, are, or hope to be major factors in international shipping and maritime trade.

These complexities have been extensively described in the first two volumes of this report. This chapter briefly addresses the literature on ports, to borrow the building blocks for an understanding of ports and their evolution. It then offers a general overview of Gulf Coast ports, focusing on what is largely assumed to be a key characteristic of port activity—channel depth. A short compilation of shipyard typologies is then given, underscoring the variety of yards. Finally, two sections look at ramifications of the construction and ownership provisions of the Jones Act, which requires that vessels engaged in coastwise trade be built, owned, and crewed domestically. The first queries why vessels but not rigs appear to be covered under this legislation. The second takes a brief look at one community’s efforts to change its “site” characteristics to be competitive in the market for deepwater structures.

1.2. DEFINING PORTS

Most definitions of ports emphasize marine shipping, not surprisingly. For example, Amy Helling and Theodore Poister offer the following: “The term *port* usually refers to a nucleus of facilities, at least some of which are publicly owned or maintained, that provide berths at which vessels can load and unload cargo and/or passengers. Maritime ports are those that serve vessels engaged in international trade” (2000:300). Harold Mayer gives a broader definition, using port to “designate a unit of organization or operation of a set of facilities associated with the transfer or interchange of waterborne commerce, or of other maritime activities such as naval installations, or the servicing of fishing fleets or pleasure craft . . . [and] some ports include specialized installations for handling ferry, cruise ship, or other traffic” (1988:78). Finally, Peter de Langen and Evert-Jan Visser highlight “port clusters” or complexes rather than delimited ports, “clusters of economic activities, related to the arrival of cargo and ships” (2005:173). They analyze, for example, the “Lower Mississippi Port Cluster” (LMPC)—the lower 230 miles of river accessible to ocean-going vessels, encompassing 12 parishes and more than 160 cargo-handling facilities. In volume of “throughput,” the favored metric for assessing the performance of ports, the LMPC is the largest port complex in the world. The LMPC, like many similar clusters, is a complex mixture of public and private ownership, responsibilities, and operation:

Five public port authorities administer the LMPC. These are all ‘political subdivisions’ of the state of Louisiana. Each has jurisdiction over a part of the river system and port cluster. The port authorities charge vessels for anchorage and berthing in their jurisdiction. This charge is relatively small, because the port authorities do not charge dredging costs or maintenance costs of port infrastructure. The port authorities invest in facilities, such as warehouses and cranes, leasing them to the private sector. Since the port authorities are able to attract capital at low interest rates through public bonds, these leasing arrangements can be attractive for private firms (2005:176).

Ports can be further defined by mode of governance, and spatial and geographical characteristics. The majority of public port authorities in the United States are “landlord” governors, developing facilities and leasing them to private operators. Others are “operating” ports, where port employees oversee day-to-day activities—the loading and unloading of grain terminals, procuring stevedoring services and longshore labor, scheduling vessel movements. All port authorities face a similar juggling task, however. They are responsible for facilitating economic development through private enterprise at the same time that they are public agencies mandated to manage the port in the public interest.

Mayer, a geographer, discusses ports in terms of the “spatial characteristics,” suggesting that the usefulness of ports and their harbors is a function of “geographic *situation* with relation to the existing or potential traffic, and upon the conditions of their *site*, which refers to the characteristics and configurations of the land and water within the port area proper and its approaches” (1988:78). A port’s situation involves both its *hinterland*—the inland area that is the source or destination of a port’s traffic—and the *foreland*—the overseas equivalent of a port’s hinterland. He illustrates these frames with New Orleans:

The situation of New Orleans, for example, is ideal for a port, and because of the situation it has developed as the second or third most important port in the United States. It is the principal outlet for the Mississippi [B]asin, which, at a million square miles, constitutes one-third of the nation’s area. The site of New Orleans, however, could hardly be less favorable for the development of a port. The Mississippi River is subject to wide variations in level and current velocity, and there is need to keep it, including the approach channels from the sea, constantly dredged. Under natural conditions, there is a threat of frequent flooding of the adjacent land area, and the river currents often make the handling of vessels in the stream difficult (1988:78).

Channel depth is a key site characteristic, and provides a useful categorization of ports on the Gulf of Mexico. A number of deepwater channel ports handle the primary transportation functions of ports, the movement of goods, including petroleum products, to and from hinterlands. A large number of shallow draft ports along the Gulf Coast can be loosely labeled as oil ports, housing the infrastructure to service and supply the offshore industry. By and large, channel depth is not a constraint on activities of vessel construction, repair, and operation. For cargo-handling ports, the concept of situation—of hinterland—has changed markedly over the

last 40 to 50 years. Helling and Poister succinctly enumerate the factors altering the geographies of hinterlands:

Major changes in ports and marine shipping in the United States since 1960 resulted from (a) containerization, intermodalism, and increasing scale; (b) reduced rail and over-the-road shipping costs; (c) advances in freight logistics and information technology; and (d) the integration of world markets (2000:300).

Containerization, in particular, has broken the “port-city interface” (Hoyle 1989), as container sites, requiring expansive land, have been located outside the historic urban waterfronts. Global trade and intermodal shipments have redefined hinterlands, allowing inland sites such as Kansas City to legitimately claim “port” status, connected by the rail and road “land bridge” to exporting and importing locations along all coasts (cf. Port Authority of Kansas City, Missouri n.d.).¹

1.3. THE GOM PORTS AND THEIR CONTEXT

As suggested above, the literature on modern port complexes focuses primarily on ports as nodes for the transmission of cargos. With the predominance now of containerized trade, the consequent demands for on-land storage and transfer capabilities, and the ever-increasing size and draft of container vessels, this literature highlights the changing port-water interface, the logistics of intermodal transport, and the channel requirements for ports to remain competitive in global trade. Few of these concerns are central to the understanding of "oil ports." The primary relevant distinctions for ports are channel depths and whether the oil-related port activity is directed to upstream or downstream sectors. Some of the ports along the Gulf are true (though man-made) deepwater ports, with channel depths greater than 35 feet. These ports can fulfill most of the cargo transshipment functions of the world's major ports. The oil-related activities of these ports are largely, though not exclusively, related to downstream connections: the receipt or export of petroleum products to refineries, local or distant. Ports or locales connected to the Gulf through shallower links—20 feet or less—generally address the needs of the upstream sector of the industry, the support of exploration and production of oil and gas. In turn, upstream-related ports may specialize as supply and support bases, or vessel and platform fabrication and repair centers.

1.3.1. Deep Draft Ports

The deep channel cargo ports along the Gulf of Mexico owe their national ranking in tonnage largely to the trade in petroleum and petroleum products. The Port of South Louisiana ranked first in the country in total tonnage in 2009, following closely by Houston (see Table 1.1). The Port of South Louisiana is along the Mississippi River between New Orleans and Baton Rouge, a concentrated stretch of privately-owned refineries and petrochemical plants. Analysts have viewed this port as part of the "Lower Mississippi port cluster," which includes port authorities

¹ With the rise of port-operating transnational corporations investing in container terminals, transportation geographers are calling for “a fundamental epistemological shift in reconceptualizing the port, from a single, fixed, spatial entity to a network of terminals operating under a corporate logic” (Oliver and Slack 2006:1409; see also Slack 1993).

administering cargo-handling facilities along the river from Baton Rouge, New Orleans, and Plaquemines parishes. Respectively, these ports are ranked 13th, sixth, and 14th nationally; together, these comprise the largest port cluster in North America. Maintained channel depth for the Mississippi River is 45 feet.

Table 1.1.

Channel Depths and Tonnage Ranking for Gulf of Mexico Deepwater Cargo Ports

Port	Channel Depth (ft.)	Tonnage Ranking
Brownsville, Port Isabel, TX	31-38	72
Corpus Christi, TX	45	5
Freeport, TX	37-44	27
Houston, TX	~40	2
Matagorda Ship Channel, TX (Port Lavaca, Port Comfort)	35	58
Mobile, AL	40	12
Pascagoula/Bayou Casotte, MS	38-40	16
Sabine-Neches Waterway, TX/LA (Beaumont, Port Arthur, Orange, Sabine Pass)	32-40	142
South Louisiana	45	1
Texas City, TX	43	10
Tampa, FL	43	17

None of the Gulf’s deep-draft ports exceed 45 feet of water depth. Into the 1980s, this was an international rule of thumb for general cargo ports, reflecting the navigational capacities of the Panama Canal. Completed in 1916, the canal has a channel about 40 feet deep. Most shipping lines constructed their fleets around the “Panamax standard,” container vessels drawing between 36 and 40 feet of water, capable of carrying 3,000 to 4,800 TEUs (20-foot equivalent units) of containers. Fully loaded, such vessels could carry roughly 65,000 “deadweight tons” (dwt). The Panama Canal was thus a chokepoint for east-west cargo trade. Of the two other critical strategic navigation passages, the Suez Canal, completed in 1879, has a depth of 58 feet, and can handle container ships carrying up to 12,000 TEU. Similarly, the Strait of Malacca, with a depth of 82 feet, can accommodate ships of 240,000 dwt capacities, with 20,000 containers. Tankers and other bulk carriers were being built to make efficient use of these other trade routes, but in the 1980s, container vessels were still largely constrained by the depth and effective width on the Panama Canal (Global Security n.d.).

The Panamax standard played a role in the contentious Water Resources Development Act of 1986, authorizing the U.S. Army Corps of Engineers to pass some of its channel dredging and maintenance costs to local entities, usually port authorities. Prior to the Reagan-era legislation, the federal government paid the full costs of “general navigation features” (GNF) for the country’s harbors; local entities were responsible for any costs associated with “lands, easements, right of ways and relocations” and the dredging of berthing areas. With WDRA ‘86, this arrangement changed substantially: local entities became responsible for 20% of GNF costs for channel depths of 20 feet or less, 35% for depths of 20 to 45 feet, and 50% of costs for channel depths above 45 feet (DelRossi and Inman 1999).

By the late 1980s, however, “Post Panamax” container ships were entering the fleet, carrying upwards of 14,000 TEUs, drafting more than 50 feet. In an attempt to recapture some of this traffic, the Panama Canal is undergoing modernization—a new set of locks that can

accommodate vessels with 50-foot drafts and 12,500 TEUs, expected to be completed by 2014. Shipping lines are building to the exact specifications of the locks, but are also bringing out “Post New Panamax” ships, exceeding the canal's enlarged size (Cudahy 2006).

Deep draft ports on the coasts are arguing for a new standard—a controlling depth of 53 feet (AAPA n.d.). A number of ports have received partial funding to move to that depth and beyond, but budgetary shortfalls and recent world recessions have slowed the efforts. “Stimulus” funds were used in 2009 to complete some deepening projects (Grier 2010), but the cost-sharing formula established under WRDA ‘86 remains. Channel projects in excess of 45 feet are costly for local sponsors.

Gulf Coast ports dutifully queue up to seek federal funding for dredging to meet anticipated container trade gains from the Panama Canal, their volume of throughput is petroleum products, transported in bulk carriers. Ocean-going oil tankers range from “Suezmax” with a capacity of around 150,000 dwt to “ultra large crude carriers,” up to 550,000 dwt, with a draft when fully loaded of more than 80 feet. Few cargo ports in the world can handle ULCCs, “ultra large crude carriers,” without specialized facilities. VLCCs, “very large crude carriers,” are now common in the tanker fleets, ranging from 900 to 1000 feet in length, with loaded drafts of 60 feet. The ports of the Gulf Coast accommodated these tankers by two means: lightering or transferring petroleum to smaller vessels, and the development of a “deepwater port.”

The Louisiana Offshore Oil Port (LOOP) was one of two entities that surfaced in the early 1970s to propose offshore terminals to receive crude from VLCCs. The other, Seadock, Inc., planned a similar terminal 26 miles off of Freeport, Texas. Both were consortiums of oil production and pipeline transport companies. LOOP’s main partners, at the start, were Ashland Oil, Marathon Oil, Murphy Oil, Shell Oil and Texaco. Marathon Pipeline would join the endeavor, and is now one of the primary owners of LOOP. Seadock was owned by Cities Service, Dow Chemical Company, Mobil, Exxon, Gulf, Shell, and a subsidiary of Phillips Petroleum (Hart 1978:69).

LOOP’s facility is some 18 miles south of Grand Isle, in 110 feet of water, deep enough to accommodate VLCCs and some ULCCs. The rationale for such facilities was explained by a counsel for the U.S. Department of Transportation, the agency charged with licensing such facilities:

In addition to permitting greater realization of the presently available marine transportation economies of VLCCs, deepwater ports offer the opportunity to reduce traffic in many of the congested harbors which now receive large quantities of oil shipments. Moreover, the environmental hazards of shipping petroleum can be reduced by deepwater ports because the number of vessels importing oil is reduced, the total number of transfer operations engaged in by those vessels is also reduced, and the need to navigate near the shores of the locations to which the oil is being shipped is alleviated, resulting in a decreased likelihood of running aground (Hart 1978:68).

As the two GOM proposals materialized, there was concern raised within the federal government over the antitrust implications of oil and pipeline company involvement. Fears were that the owning companies would exclude oil owned by others and thus monopolize the VLCC traffic, or build facilities that were of sufficient size only for the oil they owned. These issues were extensively debated in the deliberations that lead to the Deepwater Port Act of 1974: the

Senate Commerce Committee and the Justice Department both recommended that the bill prohibit ownership of deepwater ports by oil companies. The final act was a compromise. It allowed for oil company ownership, recognizing that consortiums of companies were likely the only entities with the required capital to establish and maintain the complexes—mooring, collection and pumping structures, pipelines, storage and delivery facilities. And it required “open access,” that owners make the facilities available to other shippers. But it contained explicit language to encourage ownership of deepwater ports by non-oil companies or public entities. Along the Gulf Coast, no other such entities stepped forward, so the Department of Transportation licensed LOOP and Seadock in 1977 (Hart 1978).

LOOP proceeded with its operation, delivering crude by pipeline through Port Fourchon to storage caverns—leached out of naturally occurring salt domes near Galliano. From there, pipelines connect crude to refineries in Louisiana and the Midwest. Seadock, Inc.’s primary owners, however, backed out and the entity was forced to turn down its permit for the Texas facility. The state soon created a Deepwater Port Authority to explore a similar venture, but oil companies showed little interest. Several subsequent efforts also failed to attract the necessary investments, so crude coming to most of the state’s refineries is lightered offshore from large carriers.

Lightering involves the tankers to be offloaded, smaller tankers or barges that receive the fluids through hoses in a series of “lifts,” and frequently an attendant workboat. Once moored together in open water, the vessels transfer material; fully unloading a VLCC may require eight to ten lifts of 10 to 24 hours each, thus keeping the VLSS on station for as long as 20 days. Efficiencies lie in economies of scale. Shipping oil from the Middle East in vessels that could dock at Gulf Coast deep draft ports would cost 70% more than lightering a supertanker. Lightering also avoids dead freight charges entailed in “light loading” large vessels headed for ports with restricted depths (National Research Council 1998:14).

Oil spill risks from lightering became a public concern, ironically, with the passage of the Oil Pollution Act of 1990 (OPA 90). The act prohibited certain classes of tankers from entering U.S. ports; these would have to be lightered offshore and the fear was that an increase in oil imports would enhance risks of accidents. Under OPA 90, the U.S. Coast Guard was authorized to designate four lightering zones in the Gulf, 60 miles offshore from a baseline of the territorial sea, two off the Texas coastline, one off south Louisiana, and one off Pascagoula. In these zones, the prohibited tankers—single-hulled vessels—were permitted to operate for a limited period of time, until 2015. The intent of this provision was to continue adequate supplies of imported oil until double-hulled vessels were built and put into service (National Research Council 1998).

Concern over spills from lightering led Congress to request a study by committee of the National Research Council. The findings, issued in 1998, pointed to an “excellent safety record” for lightering:

Data maintained by the Coast Guard for 1984-1996 indicate that few spills occurred during lightering on U.S. coasts, and the average spill volume was only 26 barrels (1,095 gallons). . . . The committee collected additional data from the USCG, industry, and state agencies for 1993-1997. During that time, no spills were reported on the east or west coasts, and only seven spills (accounting for less than 0.003 percent of the total volume lightered) were reported in the Gulf of Mexico (National Research Council 1998:3).

Lightering activity is concentrated in the Gulf of Mexico, accounting for about 95% of lightered oil in the U.S. The only other significant lightering operations occur in Delaware Bay. In the Gulf, transfers occur in nine areas, six of which are off the Texas coast.

These traditional lightering areas, which can be many miles wide and long, are located away from the busy fairways or traffic separation schemes leading into port areas and away from large concentrations of offshore exploration and production platforms. Mariners who often navigate these waters have come to expect lightering operations in the traditional areas and can be expected to take appropriate precautions when approaching or transiting known lightering areas (National Research Council 1998:33).

The authorities managing the deep draft ports of the Gulf of Mexico routinely seek authorizations for deeper channels. But the businesses at the ports—those moving petroleum products as well as cargo—have managed to adapt successfully to the constraints of their sites.

1.3.2. Shallow Draft Ports

Most of the shore-side activity related to offshore oil and gas exploration, production, and transport around the Gulf of Mexico takes place on waterways of 20 feet or less. The significant exception is the deepwater offshore supply complex at Port Fourchon, with a channel maintained at 27 feet. However, many of the newest generation of supply vessels and AHSTs, and offshore tugs working out of Fourchon have been built in shipyards along the Intracoastal Waterway, which the Army Corps of Engineers maintains to a depth of only nine feet. The rated channel depths for the shallow water ports serving as offshore supply bases and shipbuilding and fabrication sites are shown in Table 1.2.

Table 1.2.

Rate Channel Depths for Shallow Water Ports Serving the Gulf of Mexico Offshore Industry

Port	Channel Depth (ft.)
Bayou La Batre/Coden	12
Biloxi Harbor	12
Bayou Lafourche	9
Houma Navigation Canal	16
Atchafalaya River/Morgan City	20
Port of Iberia	12
Bayou Teche	3-7
Freshwater Bayou/Intracoastal City	12
Lake Charles Deepwater Channel	12

Two fabrication locales—Houma and New Iberia—are actively pursuing deeper channels to meet the perceived needs of deepwater rig and platform construction, and these processes will be examined in some detail below. It appears, however, that much of the shipbuilding and repair work associated with the offshore industry can be accommodated at one locale or another along the coast. For example, Edison Chouest Offshore’s primary shipyard, North American Shipbuilding (NAS), fronts the shallow Intracoastal in Larose, LA. By its own claims, NAS

. . . has built more specialized offshore vessels than any other shipyard in the world. Designing and constructing vessels only for ECO and affiliated companies, NAS built the first U.S. Antarctic icebreaking research vessel, the largest and most powerful anchor handling vessel in the U.S. fleet, the first dynamically positioned vessel in the U.S. fleet, the world's first floating production system installation vessel, and the largest water throw capacity vessel in the U.S. fleet (Edison Chouest Offshore 2003).

At the Larose yard, NAS has launched seismic survey vessels with unloaded drafts of 15 feet, 280-foot deepwater supply vessels, with unloaded drafts of 4 feet, and 350-foot anchor handler vessel with 16 foot drafts (Colton n.d.a).

Channel constraints have not precluded mid-sized yards from winning lucrative government contracts. While Navy warships are constructed on yards with deep channel access (Avondale on the Mississippi, Northrop Grumman in Pascagoula,² and the Austal facility in Mobile), Bollinger Shipyard's primary facility in Larose has a longstanding history of Coast Guard vessel newbuilds and modifications. It launched the first of the service's Sentinel-class fast response cutters in 2010, a 150-foot vessel, 6-foot draft, capable of speeds up to 28 knots. Bollinger is under contract to build up to 34 of this class (Sayre 2010).

When shipyards and fabricators do face perceived site limitations, a common response is to acquire idled or underperforming yards elsewhere along the coast. Edison Chouest, for example, acquired Tampa Bay Shipbuilding and Repair Company in 2008. The facility was previously owned by Mobile's Bender Shipbuilding and Repair, which faced financial troubles and finally closed down in 2009. The Tampa Port Authority agreed to dredge the yard's slips to 30 feet, connecting to a 43-foot channel to the Gulf. Chouest thus positioned itself to

. . . specialize in conversions, general repair and overhaul of a wide range of vessels, including product tankers, container ships, general cargo vessels, drill ships and rigs, offshore supply vessels, bulk carriers, passenger/cruise ships, LPG and LNG carriers and reefer ships (Tampa Ship, LLC 2009).

Chouest also acquired a facility in Houma at the same time that Houma-based Gulf Island Fabrication bought out two yards of Gulf Marine in Ingleside and Aransas Pass, Texas. While Gulf Island and Chouest are the primary backers of efforts to deepen the Houma Navigation Canal, Gulf Island saw the Gulf Marine acquisition as an immediate step to additional topside and assembly business. Gulf Marine's south yard, in Ingleside,

. . . is located on the northwest corner of the intersection between the Gulf Intracoastal Waterway and the Corpus Christi Ship Channel. The 45 feet deep Corpus Christi Ship Channel provides direct and unrestricted access to the Gulf of Mexico, which makes this site ideal for fabrication and assembly of many types of large structures (Gulf Island Fabrication 2007:5).

² During the study period, the Pascagoula yard was owned by Northrop Grumman. In 2011, Northrop Grumman spun off Huntington Ingalls Industries, Inc. to its shareholders.

The geography of workboats is a regional one. Vessels for the “Jones-compliant fleet”—boats transporting materials and personnel between U.S. destinations—can be built at myriad shallow-draft locations along the Gulf Coast. Channel depths are seldom constraining factors for shipyards that build offshore supply and service vessels. The geography of rigs and platforms, by contrast, is a global one, driven by a number of factors. As discussed in more detail below, structures operating in the U.S. GOM generally do not fall under the provisions of the Jones Act and can thus be built and flagged outside the United States (see below). Thus, the fabrication market is largely determined by costs, and yards with low labor costs in Singapore and South Korea have garnered much of the newbuild work. This trend has been accentuated during the deepwater era. U.S. fabricators remain competitive in the construction of conventional rigs, platforms, and topsides for mid-water work—bottom-supported structures in depths of 150 to 300 meters. For structures in deeper waters, U.S. yards have maintained their business in the construction and assemblage of complicated topsides. Stiff and Singelmann suggest that transportation risks and costs make overseas fabrication less attractive (2004:4). The jacket and deepwater hull market, however, has largely been lost to foreign builders. By the mid-2000s, U.S. yards had built only six of 39 platform jackets, none of the tension leg platform hulls, only one of 13 spar hulls (U.S. Army Corps of Engineers 2006: 35-9). None of the current fleet of 12 drillships operating in the Gulf were fabricated in U.S. yards. Only three of 16 semisubmersibles were built in Gulf yards—one at Avondale in 1972 and two at the Ingalls yard in Pascagoula in 1999 (Rigzone 2012)

One manager of a large fabrication operation in Texas offered observations on the global geography of shipbuilding and fabrication:

I mean, if you want to talk about the megaships, I’ve been to the shipyard in [South Korea]—Hyundai shipyard. They produce like seventy-two ships a year. Seventy-two ships a year, and these ain’t little ships. That’s more than one a week. When you go see the size of these puppies, they build everything from womb to tomb. They build the engine blocks. They do everything. And they put the whole ship together. It’s like selling a Taurus. When you go to a Korean shipyard, you say, “I want this model ship,” or, “I want this much displacement,” and they make you one, and they make it fast.

Hull-wise, right now we could build a hull in the U.S., but the problem is the economics for hulls haven’t been with us. We’ve bid a few of them over the years. The Koreans and then soon the Chinese and the Singaporeans have always been the real hull people. The spars, I don’t know how much artificial the spars have been with the Finnish and the Norwegians, because it’s hard to believe that they can—except they own the technology and they have some clout in that. Right? So I think that there may have been a little artificial economics in the hulls being built in Finland, but Korea and Singapore and China are real economics. They build them cheaper than anybody else, and the oil companies are willing to put up with building them over there.

The topsides, we have a little bit. As long as the production equipment and a lot of the big equipment come from the U.S., that gives us a help because the equipment is already here. We do a good job on topsides for the big things (Rodrigue 2009).

In sum, tenants of the Gulf's shallow water ports, like their counterparts in the major maritime sites, have largely adapted to site constraints. Shipbuilders and fabricators are quick to acquire properties along better-endowed waterfronts when they want to scale up their tonnage, but, as the community profiles in Volume II of this report amply demonstrate, the shallow draft port complexes are key players in the industry.

1.4. TYPOLOGIES OF SHIPYARDS

The Maritime Administration (MARAD), U.S. Department of Transportation, officially classifies shipbuilding and repair facilities as major and small. The agency is required, under amendments to the Merchant Marine Act of 1936, to annually assess the adequacy of the nation's maritime industrial base to meet the needs of national defense and national emergency response. A major yard is thus defined as

One that is open and has the capability to construct, drydock, and/or topside repair vessels with a minimum length overall of 122 meters, provided that water depth in the channel is at least 3.7 meters (Maritime Administration 2004:2).

Along the Gulf Coast, MARAD's 2004 survey included four major active shipbuilding yards with current construction activities on naval or merchant ships. These were Bender, Northrup Grumman's Ingalls and Avondale yards, and VT-Halter in Pascagoula. Subsequently, Bender closed down and Avondale is under discussion for a shutdown. MARAD further classifies as ones capable of construction and repair of 400-foot vessels. These include a number of Gulf Coast yards such as Austal in Mobile, Keppel AmFELS in Brownsville, Signal's yards in Pascagoula, Orange and Port Arthur, and Bollinger's facility in Lockport, Louisiana.

MARAD's annual surveys now include an appendix on "medium and small private yards," a listing started in 2001 to "acknowledge the important contributions of this sector of the industry to the vitality of our national economy, to the development of the U.S. offshore energy industry, U.S. commerce, and the support of an energy efficient, environmentally sound, intermodal transportation system" (Maritime Administration 2004:3). This is where the vast majority of Gulf Coast yards fall, including North American Shipbuilding Company in Larose. The appendix's notation for this yard—builder of Edison Chouest's fleet and government icebreakers, among other vessels, is simply "construction of small vessels" (Maritime Administration 2004:C-9).

Under appropriations acts in 2010 and 2011, MARAD offered grants to assist "small shipyards," defined as facilities in a single geographic location, near a maritime community, capable of building or repairing vessels 40 feet in length or greater, and employing fewer than 1,200 workers (Maritime Administration 2006).

Tim Colton, a former shipyard manager and a chronicler of the industry, provides a more useful typology of the sector, one less concerned with identifying the nation's industrial capacity. His "major shipbuilders" include those constructing naval warships and—in the past—deep-draft oceangoing merchant ships. "Large shipbuilders," his second category, "generally operate (or used to operate) well developed, mid-sized to large shipyards capable of building mid-sized to large merchant ships, mid-sized to large naval vessels, offshore drilling rigs and high-value, high-complexity smaller vessels." Within this category, Colton distinguishes active second-tier shipbuilders from second-tier shipbuilders not currently building ships, but primarily operating

repair yards. Ten of the 14 active shipbuilders are located on the Gulf Coast, as are four of six repair yards.

Finally, Colton's "small shipbuilders and boatbuilders" include yards capable of building simpler types of commercial boats such as tugs, towboats, offshore service vessels (OSVs), barges, and ferries. Twenty-eight of 77 active yards are located along the Gulf Coast; 97 of 220 inactive yards were located there as well (Colton n.d.b).

1.5. THE JONES ACT, FLAGS OF CONVENIENCE, AND THE INDUSTRY IN THE DEEPWATER ERA

The Jones Act, technically the Merchant Marine Act of 1920, has given a significant boost to Gulf Coast shipyards as reviewed in Chapter 1, Volume I. It codified U.S. "cabotage" policy, a transportation concept thought to derive from the French *caboter*, "to sail coastwise" (Frittelli 2003). By law, waterborne shipping of materials and passengers between points within the United States must be carried out on U.S.-flagged vessels, built in the country, with 75% ownership, and manned by U.S. citizens. Thus, the act covers trade along inland waterways, the Great Lakes, and coastal points, including Alaska, Hawaii, Puerto Rico, and the U.S. Pacific Islands. The U.S. Customs Service (now the Customs and Border Protection Service in the Department of Homeland Security) is charged with certifying vessels and Jones Act compliance, and the agency has struggled with the definition of "point" on the Outer Continental Shelf.

Under the Outer Continental Shelf Lands Act of 1953, U.S. jurisdiction was extended to "the subsoil and seabed of the Outer Continental Shelf and to all artificial islands and fixed structures which may be erected thereon for the purposes of exploring for, developing, removing, and transporting resources" (OCSLA 1953, Section 4(a)). Several initial rulings of the Customs Service applied cabotage laws to mobile drilling rigs while they are attached to the seabed. As one commentator notes,

Simply stated, Customs established the policy that fixed drilling equipment on the OCS [outer continental shelf] was as much a coastwise point as the port of New York. This was a significant extension of US cabotage policy inasmuch as it meant that any ships trading between the rigs and any other coastwise point must qualify under American cabotage law (Aspinwall 1987:315).

An amendment to the OCSLA in 1978 extended jurisdiction to structures temporarily attached to the seabed, including mobile drilling units and even a temporary buoy designating drill sites. Customs followed with a ruling that offshore jackets being transported to the buoy had to be carried on Jones-qualified launch barges. The four barges capable of installing mid-to-deepwater structures in the 1980s were all foreign-built. Thus,

To circumvent the 1980 ruling, American drill jacket fabricating companies began towing their drill jackets on foreign-built barges from the US mainland to open water and launching them in an area which was *not* marked by a buoy, and then making a secondary tow to the anticipated drilling site, which *was* indicated by a marker buoy (Aspinwall 1987:316). Customs reversed itself on the marker buoy issue in 1984, as more and more structures were fabricated overseas and towed to the U.S. OCS, thus falling under foreign trade, not cabotage, laws. Customs continued to maintain that capped or plugged exploratory wells were still coastwise points, whether or not they had a marker buoy (Aspinwall 1987), thus

requiring Jones fleet, U.S.-flagged and manned supply vessels when these wells were brought into operation.

The Jones Act continues to protect a segment of the shipbuilding sector along the Gulf Coast: the construction of supply vessels and crewboats which transport *personnel* and *materials* to “points” in the United States. The act does not cover vessels delivering specialized *services* to offshore rigs and platforms. This includes seismic, pipelay, heavy lift, and dive support vessels, as well as anchor handlers (IADC n.d.; Aspenwall 1987). Ironically, the “points”—drilling rigs themselves—serviced and supplied by domestic vessels do not have to be built and owned by domestic interests. And, as discussed at length in Chapter 2, Volume I, Section 2.6 of this report, the large yards of Southeast Asia, Korea, China, and Japan have captured much of the deepwater construction business, due in part to cheaper labor, but also to the reduction in domestic shipbuilding and fabrication capabilities following the severe downturn of the of the 1980s. International law has facilitated the migration of this work.

The “Law of the Sea,” developed through a series of United Nations conferences between 1958 and 1982, confirms a coastal nation’s sovereign rights over resources in the Exclusive Economic Zone (EEZ), 200 nautical miles out from shore. However, the law stipulates that the EEZ is a “high sea” for all other purposes, including navigation. Thus,

On the high seas, no one state may exercise its exclusive jurisdiction or claim sovereignty over any portion of the water column or over anything passing through or remaining on the high seas. As a result, the coastal state has no jurisdiction over a vessel navigating through its EEZ. Instead, these vessels are subject to exclusive flag state jurisdiction (Richards 2011:399).

The United States signed but did not ratify the Law of the Sea, Richards notes, and by signing essentially agreed not to take action contrary to the intent of the treaty. And the treaty itself, concerned primarily with overfishing and marine pollution, did not address the “vessel” status of deepwater drilling rigs, which were not in heavy usage in the 1980s. But several national laws and international treaties legally define mobile offshore drilling units as vessels, including U.S. case law: “MODU means a vessel, other than a public vessel of the United States, capable of engaging in drilling operations for exploration or exploitation of subsea resources” (33 C.F.R. § 140.10; cf. Richards 2011:387). Thus, as a vessel, a rig operating on the high seas is governed by the rules and regulations of its flag state.

The explosion of the Marianas Islands-flagged *Deepwater Horizon* in April of 2010 and subsequent cleanup activities brought under intense scrutiny both the Jones Act and the flags of convenience of deepwater rigs. Arizona Senator John McCain unsuccessfully sought to repeal the entire act, criticizing the Obama administration for failing to temporarily waive the act to enable foreign-flagged oil-recovery vessels to participate in the spill cleanup efforts (Bonney 2010). Of greater significance, the practice of allowing foreign-flagged drilling vessels to operate in U.S. waters came under attack in the U.S. Congress. By the end of July 2010, the House had passed the Consolidated Land, Energy, and Aquatic Resources Act (“CLEAR”), requiring that all vessels engaged in drilling activities in the U.S. EEZ be owned and crewed by American citizens (H.R. 3534).

The International Association of Drilling Contractors (IADC) was, understandably, strongly opposed to the legislation, and found support from the American Petroleum Institute, the

International Association of Geophysical Contractors, and the U.S Oil & Gas Association. An IADC white paper warned that the “Americanization” of exploration and production activities in the Gulf of Mexico would potentially drive the fleet out of the Gulf, resulting in an “OCS moratorium with no end in sight” (IADC n.d.). Several of the bills’ prime supporters did not get reelected in the fall of 2010. Thus, the legislation, which would have eliminated the \$75 million cap on oil spill liabilities—and, it was argued, make it impossible for smaller American operators to afford the liability insurance necessary to compete with the majors, such as BP—was put on hold. The Jones Act, as it stands, provides only limited jurisdiction over activities on the OCS and significant, but by no means comprehensive, stimulus to Gulf Coast shipbuilders and fabricators.

1.6. CHANGING THE SITE CHARACTERISTICS FOR THE DEEPWATER ERA

Two fabrication-dominated port complexes are actively engaged in efforts to change their “site” characteristics to better compete for deepwater platform work. Houma and the Port of Iberia have long been active in topside fabrication and both are making the case that channel depth is limiting their ability to launch the heavier structures required for deepwater exploration and production. Their cases are now before the U.S. Army Corps of Engineers, with its statutory authority over navigable waters. While the Corps’ study of the Houma Navigation Canal appears not to be publically available (but see Lawton et al. 2010), the “Final Feasibility Report” on the Port of Iberia’s plans extensively documents the economic, political, and environmental complexities of efforts to improve the site characteristics of ports.

The Port of Iberia is connected to the Gulf by a series of routes: the seven and one-half-mile long Commercial Canal from the port to the Intracoastal Waterway, then westward to the Freshwater Bayou Canal (FBC) and down to the Gulf through a lock structure, operated and maintained by the Corps, or through a bypass channel, under the jurisdiction of the Abbeville Harbor and Terminal District. The Commercial Canal is presently maintained at 13 feet deep and 150 feet wide. The Intracoastal is authorized at 12 feet deep and 125 feet wide, and the FBC has a controlling depth of 12 feet. The Water Resources Development Act of 2000 authorized the Corps to conduct a navigation feasibility study; the Corps’ initial reconnaissance study recommended deepening this route to 20 feet.

Through the planning stages, several political issues had to be finessed. First, the Corps’ guidelines for assessing the costs and benefits of projects—the Water Resource Council’s Principles and Guidelines (P&G)—had to be tweaked. The merits of navigation project under the P&G are measured against a single federal objective, National Economic Development (NED). Section 6009 of Public Law 109-13, Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Tsunami Relief, changed this procedure by creating a new category of ports, “Offshore Oil and Gas Fabrication Ports”:

SEC. 6009. OFFSHORE OIL AND GAS FABRICATION PORTS

In determining the economic justification for navigation projects involving offshore oil and gas fabrication ports, the Secretary of the Army, acting through the Chief of Engineers, is directed to measure and include in the National Economic Development calculation the value of future energy Exploration and production fabrication contracts and transportation cost savings that would result from larger navigation channels (Public Law 109-13).

The Port of Iberia's stakeholder statement in the Corps's feasibility study explains this change as follows:

As this Feasibility Study was being accomplished, it became apparent to everyone involved that the Principles and Guidelines (P&G) that the USACE typically uses for "Commodity Handling/Shipping Ports" did not capture the true National Economic Development (NED) Benefits for an "Offshore Oil and Gas Fabrication Port" and therefore Congress enacted revised legislation and "new" language that redefined NED Benefits for Offshore Oil and Gas Fabrication Ports. That language, stated in Section 6009 of Public Law 109-13, allows the inequities of the original P&G to be corrected and truly depicts the NED Benefits of this project (U.S. Army Corps of Engineers 2006:xiii).

Iterations in the Corps' documentation would refer to cost/benefit analyses as assessments of "appropriations directed benefits," mandated by Congress, to differentiate them from the Corps' own revered Principles and Guidelines. In effect oil port improvements are to be assessed in isolation: "any benefit using Deepwater Fabrication contracts is to be counted as a benefit for project justification regardless if work was displaced from foreign or domestic yards" (U.S. Army Corps of Engineers 2006:1-11). The final plan—a 16-foot channel, not the original 20-foot planning depth, was approved by the Corps' district commander in October, 2006, with the observation that the "recommended plan produces net excess benefits over costs and a positive benefit to cost ratio. None of these benefits are in accordance with the P&G, but have been measured in accordance with Congressionally mandated language" (U.S. Army Corps of Engineers 2006:10).

A second obstacle arose when one of the required local sponsors balked. The Abbeville Harbor & Terminal District in Vermillion Parish, where the majority of the channel dredging would occur, withdrew its support immediately after Hurricane Rita damaged the parish. The district, backed by the parish's Police Jury, demanded comprehensive category 5 hurricane levee protection as part of the channel improvements (U.S. Army Corps of Engineers 2006). Under the cost-sharing requirements of the Corps's projects, local sponsorship, financial as well as political, is required. The Port of Iberia is of course the lead local sponsor. In the absence of the Abbeville district—an issue still not resolved—the state stepped in as another sponsor, in the form of the Louisiana Department of Transportation and Development.

The Corps' Final Feasibility Report and Environmental Impact Statement was completed in April, 2006, recommending the 20-foot alternative. Before final release for state and agency review, the Corps' headquarters called for additional justification for the alternative, and the Mississippi Valley Division collected additional information and input. Two factors changed the Corps' recommendation. The Minerals Management Service (MMS) issued a revised forecast for deepwater platforms, projecting highs and lows over 50 years of 73 and 49 new platforms, trending downward from its earlier estimates of 90 and 56, with a corresponding reduction in the Port of Iberia's market share of new topside construction. Second, the Corps modeled modularization of topside transport through the waterways. As the addendum to the feasibility study notes,

Industry preference is that the entire topside structure (fabricated and add-on pieces) be transported on one barge to the integration site. Therefore, the analysis

described in the feasibility report assumed that single barge transport would be the most likely future alternative and would continue throughout the period of analysis. However, subsequent to submission of the feasibility report, the split shipment (two barges) possibility was researched through a series of interviews and no information to preclude the engineering feasibility of moving large topsides on multiple barges was offered. The largest units—12,000 to 15,000-ton deepwater topsides fabricated for floating production storage and offloading (FPSO) and floating production systems (FPS)—are comprised of distinct modules, which can be transported on two or three separate barges (U.S. Army Corps of Engineers 2006:3-4).

The topside for *Thunder Horse* is cited as an example: three modules, each roughly 6,000 tons, were fabricated in Morgan City, carried individually to Ingleside, and assembled on the hull structure (which was built in South Korea). The Corps' New Orleans District commander concluded that "the materials presented do not adequately support the recommendation of a federal investment in a project deeper than 16-feet at this time, providing a significant cost savings to the federal government"(U.S. Army Corps of Engineers 2006:9).

The 2007 Water Resources Development Act authorized the deepening, with \$132 million in federal funds and \$25 million in non-federal costs. Vermillion Parish continued to resist, since the dredged materials were earmarked for marsh restoration not hurricane levees for the parish, which would have driven the cost of the project to \$337 million (Rosa 2010). As the country headed into a recession and Congress fought to curtail spending and debt, the funds disappeared. The Port of Iberia has to date been unsuccessful in changing its site characteristics. Business interests in Houma are still pursuing their own efforts to enlarge the Houma Navigation Canal, but one large fabricator there went another direction, buying up a fabrication facility at Ingleside with ready access to the Gulf along Corpus Christi's deep-draft channel.

1.7. SUMMARY

The broad geography of shipbuilding and fabrication along the Gulf Coast is shaped by a number of factors. The industry's global economics have resulted in a substantial movement of work to overseas yards. There are a few facilities along the coast capable of building and launching big structures, but more typically these come into the Gulf from foreign yards to meet up with domestically-made topsides. The cabotage laws slow, but by no means halt, the movement of work out of the Gulf. And these provisions are routinely attacked by a variety of interests—from Midwestern farmers who must barge their grain on U.S.-made and crewed vessels to consumer advocates for lower shipping costs and cheaper products.

Against the backdrop of this broad geographical sketch, this volume's subsequent chapters will examine the pressing issues for the shipbuilding and fabrication sectors: the need to develop and maintain a skilled workforce, the need to run safe and profitable enterprises in a competitive industry, and the need to respond to the perennial threats of natural disasters in the Gulf.

1.8. REFERENCES

AAPA. n.d. Questions and Answers about America's Ports and the Harbor Maintenance Tax. American Association of Port Authorities. Internet website: <http://aapa-ports.org//.cfm?>. Accessed August 18, 2011.

- Aspinwall, Mark D. 1987. American Cabotage Law and Outer Continental Shelf Operations. *Maritime Policy and Management* 14(4):313-320.
- Bonney, Joseph. 2010. McCain Seeks Jones Act Repeal. *The Journal of Commerce Online*. Internet website: <http://.joc.com/>.
- Colton, Tim. n.d.a. North American Shipbuilding, Larose LA. Internet website: <http://.com/////htm>. Accessed August 18, 2011.
- Colton, Tim. n.d.b. Shipbuilding History. Internet website: <http://.shipbuildinghistory.com/>. Accessed August 18, 2011.
- Cudahy, Brian J. 2006. *Box Boats: How Container Ships Changed the World*. New York: Fordham University Press.
- De Langen, P.W. and E.J. Visser. 2005. Collective action regimes in seaport clusters: The case of the Lower Mississippi port cluster. *Journal of Transport Geography* 13:173-186.
- DelRossi, Alison F., and Robert P. Inman. 1999. Changing the Price of Pork: The Impact of Local Cost Sharing on Legislators' Demands for Distributive Public Goods. *Journal of Public Economics* 71:247-273.
- Edison Chouest Offshore. 2003. North American Shipbuilding. Internet website: <http://.chouest.com/html>.
- Frittelli, John F. 2003. The Jones Act: An Overview. Congressional Research Service Report RS21566. Internet website: http://.wikisource.org//_Research_Service_Report_RS21566.
- Global Security. n.d. Container Ship Types. Internet website: <http://.globalsecurity.org////types.htm>. Accessed August 18, 2011.
- Grier, David. V. 2010. Proceedings of the Ports 2010 Conference: Why Deepen US Harbors?—A Recession and the Panama Canal. American Society of Civil Engineers. *Ports 2010: Building on the Past, Respecting the Future*. Jacksonville, FL.
- Gulf Island Fabrication. 2007. Gulf Island Fabrication, Inc. Annual Report on Form 10-K for the Fiscal Year Ended December 31, 2007. Internet website: http://.gulfisland.com//_Report.pdf.
- H.R. 3534. The Consolidated Land, Energy, and Aquatic Resources Act of 2010. Internet website: <http://.gpo.gov//hr3534eh/hr3534eh.pdf>.
- Hart, Christopher A. 1978. The Antitrust Aspects of Oil Company Ownership of Deepwater Ports. *Transportation Law Journal* 10:67-96.
- Helling, A. and T.H. Poister. 2000. U.S. maritime ports: Trends, policy implications, and research needs. *Economic Development Quarterly* 14(3):300-315.

- Hoyle, Brian S. 1989. The Port-City Interface: Trends, Problems and Examples. *Geoforum* 20(4):429-435.
- IADC. n.d. Offshore Industry Challenges Jones Act Changes. Internet website: <http://iadc.org//%%%.htm>. Accessed August 18, 2011.
- Lawton, Crory, Dan Whalen, Nathan Dayan, and Brian Gannon. 2010. Proceeding of the Ports 2010 Conference: Tightrope in Houma: Balancing Competing Need for a Deepened Channel. American Society of Civil Engineers. Ports 2010: Building on the Past, Respecting the Future. Jacksonville, FL.
- Maritime Administration. 2004. Report on Survey of U.S. Shipbuilding and Repair Facilities. Office of Shipbuilding and Marine Technology. U.S. Department of Transportation. Internet website: http://marad.dot.gov/_Report_on_Survey_of_US_Shipbuilding_and_Repair_Facilities.pdf.
- Maritime Administration. 2006. Small shipyard Grants. U.S. Department of Transportation. Internet website: [http://marad.dot.gov/shipping_landing_page/shipyard_grants/shipyard_grants.htm?=-](http://marad.dot.gov/shipping_landing_page/shipyard_grants/shipyard_grants.htm?=).
- Mayer, H.M. 1988. The physical harbor: New demands on a scarce resource. In: M.J. Hershman, ed. *Urban Ports and Harbor Management*. New York: Taylor and Francis.
- National Research Council. 1998. Oil Spill Risks From Tank Vessel Lightering. Committee on Oil Spill Risks from Tank Vessel Lightering. Internet website: <http://nap.edu//.html>.
- Olivier, Daniel, and Brian Slack. 2006. Rethinking the Port. *Environment and Planning A*. 38:1409-1427.
- Port Authority of Kansas City, Missouri. n.d. History/Purpose. Internet website: <http://kcportauthority.com/history.php>. Accessed August 18, 2011.
- Public Law 109-13. Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Tsunami Relief, 2005. Internet website: http://.org//_cards/_id_act.pdf.
- Richards, Rebecca K. 2011. Deepwater Mobile Oil Rigs in the Exclusive Economic Zone and the Uncertainty of Coastal State Jurisdiction. *Journal of International Business and Law* 10:387-411.
- Rigzone. 2012. Offshore Rig Search Results. Internet website: <http://rigzone.com//.asp>.
- Rodrigue, Myron. 2009. Personal communication. Occupational history. Discussion with Jason Theriot. Engineer and Manager, McDermott and Kiewit Offshore. Houston, TX. August 13
- Rosa, Chris. 2010. Vermillion's Future Protection Levee may be Sinking into the Marsh. *Vermillion Today*. April 8.
- Sayre, Alan. 2010. Major Work Begins on 1st Sentinel-class Cutter. *Navy Times*. April 9.

Slack, Brian. 1993. Pawns in the Game: Ports in a Global Transportation System. *Growth and Change* 24:579-588.

Stiff, J. and J. Singelmann. 2004. Economic Impact in the U.S. of Deepwater Projects: A Survey of Five Projects. U.S. Department of the Interior, Minerals Management Service, Gulf of Mexico Region, New Orleans, LA. OCS Study MMS 2004-041.

Tampa Ship, LLC. 2009. Home page. Internet website: <http://.tampaship.com/>.

U.S. Army Corps of Engineers. 2006. Port of Iberia, Louisiana Final Feasibility Report. Volume 1: Main Report, Environmental Impact Assessment. New Orleans District, Mississippi Valley Division.

2. LABOR IN THE GULF OF MEXICO FABRICATION AND SHIPBUILDING INDUSTRY

As far I'm concerned this area is totally dependent on the shipyards. Without the shipyards, this area would have to revert back to whatever it was years ago and I'm not sure if that would sustain it today. There are too many things that people want that are sustained by shipyard wages that would not be viable with farming (PP010 2008).

The quote above represents the perceptions of many Gulf Coast residents with regard to a key role that the fabrication and shipyards play in their communities—as a primary source of well-paying jobs. The fabrication and shipbuilding industries have provided jobs to people in this region since they were established. Yet, most in the industry, who certainly shared this perspective, also talked at length about the difficulty associated with finding workers and described a variety of strategies, including bringing in laborers from overseas, to address that problem. This chapter explores those contradictions. It examines the labor needs of the fabrication and shipbuilding industry in the Gulf of Mexico and describes some of the strategies that companies used to address those needs, paying special attention to the use of authorized foreign labor immediately prior to and during the study (see also Chapters 3 and 4 of this volume).

2.1. BACKGROUND

In the United States, shipbuilding³ has historically been considered a strategic industry supporting military and commercial interests, and has benefited from federal intervention and subsidies for more than a century. While many other industries have streamlined production, automated, reorganized work, and significantly reduced the size of the workforce, the shipbuilding industry has remained relatively static. Although some notable exceptions exist, the processes and equipment in use on many yards are relatively unchanged from those used since the early-20th century when shipbuilders switched from wood to steel and welding was introduced (see Chapter 1, Volume I). The design and then construction of each vessel begins when a customer places an order with a shipyard. Lack of volume, which limits mass production, continues to plague the industry. With the exception of the Liberty and Victory ships constructed during World War II, neither government nor industry instituted a program for industry-wide standardization and mass production based on the most up-to-date technology (Vambery 1968).⁴

³ The U.S. Office of Management and Budget (OMB) is the federal agency responsible for overseeing the development of industrial classifications. Under the North American Industrial Classification System (NAICS), adopted in 1997, the code for shipbuilding and repair is 33661. The official OMB definition of shipyards is “fixed facilities with drydocks and fabrication equipment capable of building a ship, defined as a watercraft typically suitable or intended for other than personal or recreational use” (U.S. Census Bureau 2007). Illustrative examples include the building of barges, cargo ships, container ships, dredges, floating oil and gas drilling and production platforms, and floating drydocks.

⁴ The Gulf of Mexico's offshore petroleum industry has served as a significant source of demand for shipyards. The industry has supported continued specialization and the development and construction of unique platforms and vessels as the search for oil and gas has moved into ever deeper waters.

This situation has been exacerbated by fluctuating levels of subsidy payments to shipbuilders constructing vessels for the U.S. government (see Chapter 1, Volume I). Designing and constructing a large vessel requires many people, but most of the workers are concentrated in a few jobs, and their work is needed at specific times as construction proceeds. For example, in 1970, more than two-thirds of all shipyard employees worked as craftsmen or operatives and almost three-fourths of them were in “blue-collar” jobs (Rubin 1970). That proportion did not change much through the remainder of the 20th century. At the end of the 1990s, two-thirds of the shipbuilding and repair workforce was in production, working primarily as fitters and welders (Bureau of Export Administration [BXA] 2001). Fitters put together the pipes and steel plates that make up a vessel’s structure, while welders secure these plates together. The need to minimize the amount of material applied with each weld, as well as to control both the vessel’s weight and cost, creates a demand for highly skilled welders (see also Chapter 4, this volume).

Developing and maintaining a workforce in this environment creates special challenges. Shipyards have tended to respond to fluctuations in demand for their services by hiring large numbers of people when there is work to do and then laying them off when the work is cut back. Analysts have identified high turnover and overspecialization as key workforce problems, especially among production workers, and industry officials have considered labor shortages in both skilled and unskilled positions to be a significant problem for at least a century. In 1970, for example, turnover rates within the Gulf of Mexico’s shipbuilding and fabrication industry were double those in other industries, reaching as high as 75% annually. Employees with more than five years of seniority were rarely found working more than 1,600 hours per year for the same employer (Rubin 1970). These conditions were exacerbated during the 1970s when the Gulf oilfield was booming and yards had difficulty recruiting experienced labor, especially welders, fast enough to avoid delays in already tight construction schedules (see Chapter 1, Volume I).

High rates of turnover in U.S. shipbuilding have been attributed to uneven workload, harsh work environments, the perception of the work as low-skilled, and a competitive labor market, while overspecialization has been blamed on government contracts (particularly military procurement), union activity, and tradesmen certification (Rubin 1970; Whitehurst 1986; BXA 2001). Many analysts conclude that the federal policies have served to widen the gap between U.S. and international shipyards (Vambery 1970, 1968; Whitehurst 1986; BXA 2001). Recommendations have focused on technology transfer in production and management, training, and mechanisms of outsourcing redundant labor when demand is low (e.g., OTA 1983).⁵ Still, despite innovation in specific companies, such as the introduction of the lean production business model (BXA 2001) and modular manufacturing (e.g., Austal 2009), little change has occurred. Consequently, worries about U.S. capacity and competitiveness persist, and though some vessel construction must remain in the United States, many companies have organized to move any work not subject to the Merchant Marine Act, also known as the Jones Act (see Chapter 1, Volume I), out of the country and have restructured those jobs that do remain in the United States so they can hire and fire workers quickly to keep costs as low as possible.

Although shipbuilding in the Gulf of Mexico follows national patterns in many respects, there are notable differences, a number of which result from the offshore oil and gas industry’s presence in the region. World War II stimulated the establishment of many Gulf Coast shipyards,

⁵ The use of H-2B workers provides an alternative solution. Companies effectively insource labor when demand is high without incurring full obligations to regular employees.

but, after the war, the Gulf's newly developing offshore petroleum industry created demand for drilling vessels, boats, and platforms (see Chapter 1, Volume I). This equipment emerged in part from the shipbuilding industry but was also distinct from it. Within the Gulf region, during the study period, in sheer numbers of employees, the few large yards that worked primarily on military contracts still dominated. Northrop Grumman, the most active of the region's "big six" shipyards, has operated primarily in service to the U.S. Navy (St. Pé 2008). Still, even the large yards have sustained their workforces by taking commercial work for the oil and gas industry during slow times.

The petroleum industry has moved from land first over water, then offshore, and finally into deeper water. With each move, the industry's ever-changing requirements have turned the need for ongoing modifications and specialization, perceived as a liability in most U.S. shipbuilding, into an advantage for the Gulf region's shipbuilders. One manager of a mid-sized shipyard in southeast Texas commented on some of the unique demands created by the petroleum industry in inland and nearshore waters.

Boats for petroleum are smaller. Moving petroleum products is different because the high demand in the industry means that you are moving smaller loads more often, and it really depends on quick transport, so they're pushing two to three barges at a time, maybe just one. [And in petroleum transport] they always want it right now, and some of what you move is volatile, so you deal with smaller tows and loads down here compared to upriver (BM023 2008).

Offshore, environmental regulations that require drilling spoils to be disposed of onshore, rather than thrown overboard into the Gulf as was once common, have made it necessary to modify the barges that carry waste to prevent spillage in rough seas and to allow the waste material to be heated in the barge so it remains liquid during transportation. Then, movement into deeper water calls for larger vessels with specialized capacities.

Companies that service this industry have led the world in innovation in the design and construction of specialized offshore service vessels (OSVs), drilling rigs, and production platforms. Such innovation must be supported by large numbers of engineers and highly skilled craftsmen, as well as by workers holding jobs that require little if any skill and must be performed under difficult environmental conditions. These diverse needs create particular labor challenges in the Gulf, particularly in the fabrication and shipbuilding industry. Because the low-skilled jobs outnumber those requiring specialized skills, the shipbuilding industry is perceived by many as a place where workers end up rather than one to which workers aspire. Shipyard jobs are seen as less desirable than even craft positions of similar kinds in other petroleum-related sectors, such as the refineries (see Volume II). As noted elsewhere in this report, international markets have changed during recent years and, in response, vessel, rig, and platform construction in the Gulf of Mexico has been replaced, to a large extent, by repair and refurbishment work. Some observers and analysts report that this shift, too, has negatively affected the perceived status of work as a fabricator or shipbuilder, not only for craftspeople, but also for engineers and project managers.

Add to these factors a general rejection of craftwork in favor of professions, and the result is that, even when offering wages higher than those for local positions with equal or even greater skill or education requirements, the industry has struggled to remain attractive to young people and others looking for work. Managers and personnel directors, Chapter 3 reveals, regularly

decried what they perceive to be the poor quality of the workforce, and the fact that potential workers will choose not to work at all or to take lower paying jobs in the service industry, rather than shipbuilding and fabrication jobs, some of which offer possibilities for advancement.

Other factors, too, affect who can work in the industry. Over the past three decades, a suite of federal policies concerning national security and high-risk operations, though not specifically targeting shipbuilding and fabrication, have added to the industry's challenges. The events of September 11, 2001 greatly escalated security concerns and numerous policies were put in place to restrict access to the U.S. maritime transportation system. Transportation Worker Identification Credentials (TWICs), for example, are "tamper-resistant biometric credentials issued to workers who require unescorted access to secure areas of ports, vessels, [and] outer continental shelf facilities and all credentialed merchant mariners" (TSA n.d.). A consequence of these and other policies has been to further reduce the potential workforce available to the fabrication and shipbuilding industry.

Initially, the presence of very large shipyards within the Gulf region helped assure that a latent skilled workforce was present. Similarly, the evolving patterns of work associated with the offshore oil and gas industry, wherein coastal residents incorporated shift and seasonal work into their annual livelihood cycles, enabled companies to benefit from routine expansion and contraction of their labor forces. Small and mid-sized yards, in particular, were able to take advantage of the local workforce to profit from the dynamic and uncertain industry. A former executive of a mid-sized marine fabrication company in southern Mississippi commented: "But what made us so flexible was within one week we could hire 100 skilled workers, then when the work was done we laid them off. At the end we didn't try to keep them on. One to two months later we could rehire, maybe not the same people. Sometimes when we signed a contract in Houston, people would know before we got back. Word spreads. We had work and they wanted that kind of work because they wanted to work lots of hours and then take off when they wanted to go hunting or whatever." This executive also observed, "Today you couldn't hire 100 people in a week. Ingalls used to employ 24,000 people, now they have 11 to 12 thousand. That's where some of our workers came from" (VP116 2008).

This chapter examines the changes that have occurred within the industry, focusing particularly on how the loss of the reservoir of workers who could be tapped to fill short-term labor shortages has forced fabrication and shipbuilding companies along the Gulf Coast to develop alternative strategies. The chapter examines four sources of employees and their interactions with the industry: (1) regular local labor; (2) other U.S. labor; (3) prison labor; (4) and international labor.

2.2. BRIEF REVIEW OF KEY LABOR CONCERNS RELEVANT TO GULF COAST FABRICATION AND SHIPBUILDING

As general U.S. labor policies and practices have evolved, so too have the practices of companies in the fabrication and shipbuilding industry, both nationally and in the Gulf region. This section outlines key concerns that emerged from discussions with people directly involved in the industry and those responsible for employment, youth development, and other community services in the study communities.

All four states that are the focus of this study are right-to-work states. In Louisiana, an "employment-at-will" state, for example, an employer may legally hire, fire, suspend or discipline any employee at any time and for any reason, good or bad, or even for no reason. Employers, however, must follow federal law with regard to discrimination against any employee on the basis of the employee's race, sex, age, religion, color, national origin, disability,

pregnancy or childbirth, sickle cell trait, handicap, or smoking (Louisiana Workforce Commission 2011). Of the four states, at 10.1%, in 2010, Alabama had the highest percent of the state's employees who were members of unions (U.S. Department of Labor 2011a; U.S. Department of Labor 2011b). In Texas, only 5.4% of employees were union members in 2010, in Mississippi that number was 4.5%, and in Louisiana it was 4.3%.

2.2.1. Contracts, Hours, Wages, and Benefits

In general, wages in the South lag those paid in other parts of the country (see U.S. Department of Labor 2010), and across the region there are significant differences between wages paid for the same jobs. Though a labor advocate in the region observed, "There's no difference between Bayou la Batre, Houma, and Lagos, Nigeria. We're treated like a third world country. The wages are depressed here" (SD014 2007), wages in Brownsville, Texas were reported to be lower than those in the other communities due to that city's proximity to the U.S.-Mexico border and the availability of a large labor pool (see Volume II). Within this context, in many of the study communities, jobs in the fabrication and shipbuilding industry, as well as the broader offshore petroleum industry, are among the most high-paying ones available. The Merchant Marine Act established Construction Differential Subsidies to equalize vessel construction costs, especially due to the higher costs of U.S. labor, and this helped to prevent wages from falling too far as competition from overseas yards increased. Still, the relative attractiveness of jobs in fabrication and shipbuilding depends on what else is available. A manager of a Texas workforce center commented, "The shipyards are a stable force, but not a driving force. They just can't compete with the refineries, who have the luxury of a benefits package, and pay more than the shipyards... The big time that you see this is during the [refinery] expansions. This is when [the shipyards] really notice their numbers going down and [that they are] having a harder time keeping their workers on. For the short term, [the workers] pack up and move over to the short term work at the refineries, but they are often back looking for their old job within six months" (BM002 2008).

Many shipyard workers rely on overtime wages to earn what they deem necessary to meet their needs, but their ability to work more than 40 hours per week depends on whether they can tolerate long hours under the working conditions they face, the work is available, and the companies are willing to pay the overtime. According to a respondent who had been the chief operating officer (COO) at a mid-sized fabrication yard in Mississippi in the late-1990s, "Generally everyone worked at least 50 hour weeks, so they worked 5 days of 10 hours each. Sometimes they worked 60 hours a week if they had to. They [the company] tried not to do more than that because then it got really expensive. In the winter they would go to 12 hour days because no one would overheat, but that was only if the end justified it. . . . It's a tough place to work. It was tough to only get one day off every week" (PP012 2008). And many employees cannot sustain that level of work. The COO continued, "That's probably why there is such a high turnover rate since people just get burned out. They give bonuses based on a formula of attendance, seniority, and safety record, when they do give bonuses, which wasn't always. When we were going through the hard times no one was getting bonuses, but when times were good this was how it went."

Though many of the smaller yards reported they could not pay as much as the larger ones, they competed for workers by offering greater flexibility, opportunities for doing more than one job, and the chance to work more hours per week. A young trainee commented, "The money's amazing. I make 64 hours a week, every week" (SR008 2008).

Fluctuations in the offshore petroleum industry, driven by everything from global oil prices to storms, affect many of the Gulf yards. Like others that operate within that industry, companies and workers are under great pressure to be available on demand and to respond quickly due to the enormous costs involved in exploration and drilling projects and the need to meet tight schedules for both newbuilds and repairs (see Austin et al. 2002) A shipyard in the Golden Triangle, for example, reported going from a labor force of “practically zero” just after Hurricanes Katrina and Rita struck, to a peak of 1,300 to 1,400 hourly employees within eight or nine months. During that period, due to pressures to repair rigs, platforms, and vessels and get them back on the job, welders were working seven days a week, 12 hours a day, and some were making close to \$100,000 a year by working 80 and more hours per week. “That’s a lot of money! That’s very good money for someone who didn’t finish high school,” noted the company’s information officer (BM004 2008). Within a year, the company had laid off most its workers and was doing only minor repair work.

Many within the industry recognize the problems associated with getting and keeping workers, but sustained efforts to address the challenges have been lacking. As indicated above, wages are not the only factor. A fitter observed, “Well, usually we work nine hours, but if the boat’s in a rush, you might work 12 or 15 hours a day, seven days a week. As long as you want to work, they let you work. Sometimes it’s mandatory that you work seven days a week. If you don’t do it, they might give you a couple days off and if you keep doing it, they’ll run you off, fire you... A lot of those boats are on the job and have to go off the job to be repaired. So when they come into repair yards, they want to repair it as fast as possible so it can go back to work. That’s why you work all those crazy hours. Rushing to finish the job is similar to other things, like wanting a remodeling crew working on your house to finish as quick as possible or quickly rebuilding classrooms in a school after a fire, but the difference is that the shipyard owners are money hungry” (HG025 2007).

Former shipyard owners and managers agreed, though they argued that they were also motivated by a desire to retain their employees. According to a former manager at a large shipyard whose family had been long-time shipbuilders in southern Mississippi but also fabricated other metal products as necessary and started constructing vessels for the offshore industry when the demand grew, “We built numerous semi-submersible oil rigs and numerous jack ups. We were kind of like prostitutes, we would do anything for money. If you could agree on the price and it was made out of steel we would do it” (PP010 2008). When a former associate (PP009 2008) added, “And it was also to maintain the skilled welders,” the manager continued, “We did not want to lose our manning base which is trained welders and trained shipcutters and electricians. Of course, railcars don’t have any electricians on them, but we had untold amounts of welders and steel workers in the railcar business so that we could flop back and forth between shipbuilding and railcars” (PP010 2008).

Designing and then fabricating a vessel, rig, or platform involves many steps, each requiring employees with different skills and expertise (see Chapter 4, this volume). Few companies are large enough to have more than one or two large projects going on at a time, so there are necessarily slack periods for specialists. Knowing which companies have major projects, the status of those projects, and where their skills are needed keeps many employees on the lookout for new opportunities. While welders are notorious throughout the region for leaving employers to take jobs right down the street that pay slightly higher hourly wages, they are not the only workers to move about. The personnel manager for a mid-sized yard offered her perspective:

Generally in the yard people would only leave if they got fed up with the job. And then they might come back after anytime between six months and three years. The workers wouldn't go other places for more money because in general all of the places pay the same. We would match whatever the other places were paying in terms of benefits and wages. When it came time to renew contracts for the next year, they would have human resources find out how much the other places in the area were paying. The only way to keep your people is to make sure you are paying what your next door neighbor is paying. But engineering was different in that they were constantly looking for new jobs. Engineering especially, once the rig was complete, there might be work still going on, but that's it for them because the contract is over so they better start looking for a new job. I would say that two months into a job people in engineering would start looking for a new job and they might leave early. When a new rig comes in, there is the need for lots of engineering. But when a rig comes in to be refurbished there are only specific tasks to be done and you don't need that many engineers (PP012 2008).

A supervisor at a large yard noted that the situation had changed in recent years, even for the engineers: "The engineering department is smaller than in the past. There isn't a lot of turnover there. It used to be large and have a good turnover rate. People would get out of school, come here, and go to another job. Therefore we trained a lot of the engineers out there" (VP013 2007).

Labor contractors have become a significant force within the Gulf of Mexico offshore petroleum industry as well as the region's fabrication and shipbuilding industry. Many contractors hire employees on a full time basis, offering salaries and benefits and placing them where work is available. The contractors only make money if they have sufficient employees and they can keep them working, so their ability to "take care" of their workers depends in large part on the breadth of employment options available to them. Because their success depends on both employers and employees returning to work with them, they try to stay abreast of conditions within the companies. Some company owners argued that they use labor contractors primarily to find and try out skilled laborers because temporary agencies and contractors are very expensive, and they can hire and release unskilled laborers themselves (BM004 2008; SR007 2008). Others note, though, that they use labor contractors to get sufficient numbers of unskilled laborers as well, and that by using contractors they can more easily get rid of employees. Some have figured out how to do both, as a manager at a small yard with about 30 full-time employees explained: "The guy who owns this place also owns a labor contracting agency, so whenever we need to ramp up our workforce, we have easy access to these guys, and when we need to cut back, we're not committed to these guys. . . . Really and truly, we don't have very many welders on the payroll—almost all of our welders are contractors. But that's the benefit, if you need a welder for a week, you pay and have them sent out, if you need a fitter, you get that. You don't have to worry about keeping them busy" (BM087 2008).

Large companies, too, have established their own labor contracting firms. According to Gulf Island Fabrication's 2007 Annual Report, "The dramatic increases in post-hurricane labor rates coupled with the increased demand for labor in the upstream and downstream sectors of the fabrication business, have caused not only a shortage of labor, but an abnormal increase in labor rates for skilled workers. This required us to supplement our labor force to a large extent with contract labor... In May 2007, in an attempt to reduce the turmoil related to labor issues, we formed a limited liability company called Gulf Island Resources, LLC to hire laborers with

similar rates and terms as the contract labor service companies provide... Under this arrangement we can better control the quality of these employees and have the flexibility to increase or cut back our forces without affecting our core employees” (Gulf Island Fabrication, Inc. 2007:6).Some labor contractors offer benefits to their employees while others do not (SR032 2008; BM007 2008; PP020 2008).

Employees may not have much choice in deciding whether or not to start out working for a labor contractor if the companies with whom they are seeking work do not hire employees directly, at least not at first. Some individuals choose to remain contractors because they can earn higher hourly wages, even if they do not earn benefits. This option was reported to be especially popular among single workers (SR032 2008), though employees with spouses whose jobs provide benefits could also follow this path (see Austin et al. 2002). Some contractors recruit from and for a fairly extensive region; when labor demands are high, they report investing a lot of money in recruitment, targeting communities with plant closings (SD015). Some contractors reported having employees who preferred out-of-town work because they could earn per diem and lodging on top of their salaries and overtime (RC069 2008). In other cases, though, out-of-town workers ended up losing money, particularly if they had a family to support, because they tried to maintain households in two places (VP094 2008).

The presence of contract employees on a yard can increase pressure for higher wages as the company employees and contractors all work together and, if they share the same language, they can communicate about how much money they make and about the working conditions at other yards. Some companies are known within their communities for trying to lure others’ workers; some managers who participated in this study emphasized to researchers that their company would not specifically go after workers from another yard or facility. Especially where there are lots of employers, some contractors supply workers of only a certain type, such as pipefitters, and the companies go to different contractors to meet their labor needs.

Generally, contract employees are expected to supply their own tools, but, especially after the 2005 storms when companies were bringing in workers from long distances, the contractors reported having paid for transportation, tools, and food for their recruits, at least in the beginning (VP094 2008). Contractors compete for clients as do others in this industry and, to make a profit, they must balance the number of workers with the number of jobs available..

For some occupations, there may be sufficient work, but the contractors cannot find people to take it. The contractors are generally aware of working conditions on the various yards and the challenges of placing workers with some companies. As one recruiter noted, “[Company A] is known for having long contracts; if you hire on, you’re good for two to three years. Sometimes they have four-year contracts. [Company B] fluctuates with the ups and downs of the company. They’ll call to get 20 to 30 people, we’ll put them out, and they only work them a couple of days. It gets people upset” (VP094 2008). His colleague added, “They want us to hang on to the workers, so that if they want them again in a couple of days [they can have them], but they’ve [the workers have] moved on” (VP095 2008). Another contractor reported on the challenges associated with mergers and buyouts and noted that conditions on a yard might change when ownership changed hands, but the yard’s earlier reputation would often persist: “[Company A] has slowly built up credibility, but I still won’t touch them. [Company B] has always had a good reputation. [Company C] came in 5 years ago. [The owner of another yard’s] son opened up [Company C]. He’s gotten pretty big and runs a real decent outfit. [Company B] was here a very long time. It was owned by [...]. They sold to [another company] but they kept the name.

[Company D] was where [Company A] is now. [Company E] was next to [Company D]” (SD015 2007).

Reflecting on the conditions workers face, one labor contractor observed, “Executives need to be praising these people. What’s wrong with spending five or fifteen minutes talking to people and asking what’s going on? If you’ve been working in a tank for hours doing your job, and take a break for two minutes to catch your breath, and your foremen comes by, you could get in trouble because it looks like you’re not doing nothing. Executives need to see [what these workers do]. If they could, they’d respect it” (VP094 2008).

Of course, not all contractors exhibit such concern for their employees. Throughout the industry, people spoke of workers as “bodies” to be deployed when and where they were needed (see also Higgins 2005). In the end, at both ends of the spectrum, from highly skilled, professional positions to unskilled jobs, the wages and benefits offered in the industry often are not sufficient to offset the negative aspects such as danger, unpleasant working conditions, hard labor, and unsteady employment. Though not consistently, employers have attempted to create career paths to encourage workers to stay on the job longer. However, while wages might increase with length of employment, they are also likely to be cut again with the next downturn. Thus, high turnover remains a significant problem.

2.2.2. Turnover, an Aging Workforce, and Training

Turnover was reported in all study areas and within almost all companies as a problem, not entirely related to the fluctuations in the number of workers hired by a company. Several employers noted that they have a relatively stable-sized workforce, but that there is tremendous turnover among their workers. Several participants cited the number of W-2 forms they sent out, and compared that to the number of workers they had on their yard at a time, to illustrate their point. For example, the operational manager at a mid-sized company that maintains a total workforce of about 150 observed that he sent out over 350 W-2 forms in 2007 (BM023 2008). Turnover is expensive for both employers and workers, in both time and resources for completing the hiring process. The need to provide evidence of certifications, drug testing, background checks, and other pre-employment screens has increased the costs for everyone (see below).

Despite high turnover, workers did report developing bonds with their co-workers, one of the positive aspects of the job for some. Because of long work hours, it is at work that employees see one another. A fitter noted, “It’s pretty good in the shipyard, I can’t complain. I had some hard times, but some good times, too. [Pause] The shipyard is like any other job, it just depends on what you’re willing to put up with. It’s bad enough to be out there in the sun and sweating, and then somebody comes over and chews you out that don’t make any sense. You get aggravated, you know. But otherwise, it’s alright. [Pause] It’s pretty good, I guess.” This individual was not working at the time of this conversation and added, “I kind of miss it a little bit.” When asked why, he responded, “All my friends are out there and I don’t see them too often anymore. When you work out there, you have people to talk to. I kind of enjoyed that. . . . In the shipyards, it all depends on who is running it. If you have good people running it, it will be alright. If you have bad ones that don’t care about the workers, you’ll have a hard time” (HG025 2007).

Added to high levels of turnover are region- and industry-wide challenges stemming from large numbers of retirements. As the baby boom generation ages and retires, concerns about American business and industry’s ability to address the knowledge gap they will leave behind and find an adequate workforce intensify. Across the study communities, both employers and

workers, as well as economic and workforce development specialists, expressed significant concern with the aging workforce within the fabrication and shipbuilding industry. Clearly, the problems associated with an aging workforce are magnified in this industry as companies face significant challenges attracting younger workers. During this study, many reported that they were drawing on recently retired employees who were serving as consultants.

A communications officer within a mid-sized shipyard summed up a story repeated by many:

[It's] definitely an older workforce. In the shipbuilding business period, supervision and management ranks are all somewhat older. Your experts will be 60 plus. There is some of a younger generation coming in, but not many. Those guys that do come in when they are young, they are becoming gold or even platinum, because they are the only ones that can run the industry, if they can get in. One of the problems is the industry boomed from the 30s to the 70s, and then it just went dead in the 80s, so you lost that connection of building the workforce. So now you have your old guys that are coming back. [Our company] has project managers in their late-60s and early-70s. It's definitely an older workforce (BM004 2008).

Thus, even when the overall shipbuilding and fabrication workforce is not growing, there is a continual need for attracting and training new workers (see also Chapter 4, this volume). Efforts to address workforce shortages through training are not new, nor are debates over school-based versus hands-on training and questions over the role of government versus industry programs (Dooley 2001[1945]). Between 1874 and 1936, diverse federal legislation supported maritime training through schoolships (schools operated on ships), internships at sea, and other approaches (Merchant Marine Academy n.d.). The Training Within Industry (TWI) program was developed during World War I as a federal program led by industry representatives who developed techniques and programs that were voluntarily adopted by individual businesses, including standards and manuals for shipbuilding (e.g., Bethlehem Steel Company's *An Introduction to Shipbuilding*; see Dooley 2001[1946]). Subsidies under the Merchant Marine Act of 1936 supported union apprenticeship programs, though these have remained unfunded since 1982 (MARAD 2008) when they came under fire during the Reagan administration (BM025 2008). As noted above, World War II escalated the amount of shipbuilding in the United States and exacerbated labor shortages across the industry, especially the acute need for certified welders. In part the demand for workers was met by the movement of new groups of people into the workforce, including women, and this created demands for training. Due to questions about the adequacy of school-based training programs, some yards instituted in-house training programs (Dooley 2001[1945]).

Still, fluctuations within the industry affect the ability of shipyards to guarantee work and therefore negatively impacts training programs as trainees may not complete their programs before the next round of layoffs (Rubin 1970). In communities where a large fabricator or shipbuilder does a lot of training there is generally a pool of employees with at least some skills that others can draw on as needed. As companies have downsized, there have been some efforts to achieve similar goals through collaboration. Spearheaded by officials from Alabama's two-year colleges, the Gulf State Shipbuilders Consortium was established in 2006, through a grant to

the Alabama Technology Network to assist shipbuilders affected by Hurricane Katrina along the Gulf Coast,⁶ as a membership-based, regional cooperative group of shipbuilding companies, suppliers, educational institutions, and economic developers. The Consortium was established to “promote increased productivity and improved competitiveness in the gulf coast shipbuilding industry” (Gulf States Shipbuilders Consortium 2011), in part by addressing the critical shortage of technically skilled workers available to Gulf Coast shipbuilders, and has developed several training programs, including its “shipfitter boot camp” which incorporates both soft skill and technical training (Gulf States Shipbuilders Consortium 2008).

In some industries, and especially in other parts of the United States, education and training needs, as well as bargaining for increased wages and benefits, are addressed by labor unions. Within the industry in the Gulf region, however, the number of unionized yards and workers has remained small (see Chapter 1, Volume I). One company owner observed that he was first brought to the Gulf to deal with union issues and later ended up purchasing the company, which remained a union shop through the busy 1970s but then had to drastically reduce its workforce to eight employees during the 1980s downturn, losing its union affiliation (RC012 2008). At the time of this study, only Northrop Grumman employees were represented by labor unions. Though historically there have been periods when labor and management relations were especially strained, at the time of the study both company and union representatives argued that they had a functional working relationship (see also St. Pé 2008).⁷

The offshore petroleum industry in the Gulf of Mexico has been staunchly anti-union throughout its history (Austin et al. 2002). Managers of yards that provided service to that industry argued that the work stoppage clauses of the oil and gas companies meant that their companies would lose contracts if their workers were organized. One COO explained how her company made sure its employees understood this: “We would bring in workers during this time to talk with them about what was going on. We would bring in workers in small groups, because in large groups it’s easy to miss the point. They would explain to the workers what they would get from being in a union and what they got from staying out and ask them, ‘Where’s the difference?’ Apparently they did a good job selling not being in a union since they are still not union.” This individual nevertheless noted that the presence of the unions in the large yards exerted positive pressure on wages everywhere and “made [the companies] very aware of having to treat their workers well. So in a way they benefit from unions without having them” (PP012 2008).

Golden Triangle, Texas, which once was recognized for the strength and effectiveness of its labor unions, saw its labor movement eroded by specific attacks and then further weakened by the decline in the overall size of its membership base as the number of fabrication and construction jobs plummeted with the petroleum industry downturn in the early-1980s (see Allen, Green, and Reese 2011). A labor advocate commented that the effects were far reaching, “In Sabine Pass, we had 25 years of busting unions, busting the apprenticeship programs. They destroyed any connection of the dignity of work. They could be making 36 dollars an hour, but nobody does that because that’s not what you do” (SD014 2007). Industry associations, such as the Associated Builders and Contractors, which advances “the merit shop construction

⁶ Significant funding was devoted to workforce training across the Gulf Coast in the aftermath of the storms, particularly in construction industries.

⁷ This continued into 2011, when Northrop Grumman’s Pascagoula shipyard became Huntington Ingalls Industries (see Havens 2011).

philosophy, which encourages open competition and a free-enterprise approach that awards contracts based solely on merit, regardless of labor affiliation” (Associated Builders and Contractors, Inc. 2011), offer an alternative approach to training in the region (SD006 2007, SD007 2007).

2.2.3. Equal Opportunity

Though women entered shipyards in unprecedented numbers during World War II, they were quickly laid off or quit when the war ended and men returned to take their jobs, and employers returned to hiring almost exclusively men (Gregory 1974). Despite occasional efforts specifically aimed at recruiting women, and comments by some residents that the yards offer good employment options, the number of women in the industry remains small, and female employees tend to be concentrated in a small number of occupations. Some companies in the study area were reported to hire women while others were reported as unlikely to do so. A young male training to be a welder fitter noted, “We have so few women around that when they’re there we slack off at work. We show off, try to get her attention, get a little competitive between ourselves. Like, there’s some new girls in the office home from college for the summer, and it makes it harder for me to work ‘cause they’re cute. Even the woman who works at the front office in the bunkhouse, she’s older and married and has kids and stuff, but even she gets a lot of attention she probably doesn’t want. But it’s hard to help it. I mean, I haven’t spent time with a woman in a while and when I have it’s just been partying, so it’s not quality. It can get depressing and lonely” (SR008 2008).

With regard to jobs that are appropriate for women, a labor recruiter noted that a lot of women enter the industry as fire watch and laborer or start out “down in the pontoons.” Though his company sent out welders and pipe fitters to the yards, he found, “They’ll go out there and see how hot and hard it is and try to change to Walmart. There are not a whole lot on average. In the dead heat of summer you start with 10 women and at the end of two weeks you end up with maybe one” (VP096 2008).

Few women who worked in the industry participated in this study, reflecting their relative absence overall. Those who participated in the study argued that their experiences depended on several factors, including the jobs they held, their supervisors and co-workers, and the way they handled the men (e.g., SR024 2008, HG005 2007). Few women are in management positions. As one former administrator noted, “It’s tough to get into management because it’s tough to get in unless you start out in the field. Even if you have a degree but don’t have any field experience you don’t have any credibility. Even production superintendents have field experience. They started out in the field and worked their way up like” (PP012 2008). Women who worked in clerical jobs could and did rotate among local industries. In southern Mississippi, for example, the options once included the refineries, shipyards, and the paper mill.

African Americans have been employed in U.S. shipyards for more than a century, though rarely in the higher-paying jobs (Rubin 1970). In the Gulf of Mexico, especially, through the 1960s and into the 1970s African Americans were confined to unskilled and low-paying positions. At the same time, the fabrication and shipyards provided some of the first opportunities for African Americans to enter the offshore petroleum industry (Austin 2008). As opportunities for blacks expanded to include the refineries and other facilities, some left to take them (PP001 2008).

While many argued that interracial relations on the yards had improved by the 21st century, others still described tense work environments. Labor shortages have certainly increased the

pressure on employers to establish positive working conditions, but they are not the only motivation. A receptionist at a small shipyard noted, “One time, someone hung a noose in the yard. We all thought it was a new employee, a white guy, having some problem with [an employee] ‘cause he’s black. We were scared to tell [the boss] and not sure who to tell, so P- and I decided to tell [the boss’s] mama. She came in here, dragged [the boss] out onto the yard, called the men around, and gave them a real talking to. ‘We will not tolerate prejudice against this treasured member of our [company name] family,’ she said, and told them that anyone who had a problem working with someone of another skin color could leave on the spot. That’s the kind of environment we run, and I appreciate it” (SR006 2008).

In general, companies expected their employees to work in multiracial and multiethnic environments. Some, though, admitted to using members of one group in competition with another (see also Reich 1981; Brody 1965, cited in Moberg and Thomas 1993), frequently repeating the stereotype that Hispanics had a more favorable work ethic and made better workers than blacks (see also Donato 2004). At the time of this study, Hispanics represented the majority of the workers in many of the Texas shipyards. One manager at a mid-sized shipyard noted that African Americans were reluctant to work in a crew that had become majority Hispanic (BM001 2008).

Outside of work, employees reported that they generally socialize with members of their own racial and ethnic groups. A young Mexican-American who had been born and raised in Corpus Christi but was working in Galliano observed, “We socialize separately, my friends with my friends, the Filipinos with the Filipinos, the Blacks with the Blacks, but it’s generally friendly” (SR008 2008).

2.2.4. Work Environment, Safety, and Drugs and Alcohol

Among the factors that employers and workers reported affected their satisfaction with or concerns about their workplaces was the physical work environment. Shipbuilders in the Gulf region work long hours in hot, humid, environments; rain and storms can cause work stoppages, decreasing productivity on the yard and workers’ paychecks. Two approaches that have been tried by some yards are to use modular systems to manage the work flow and to cover outdoor areas to provide at least some level of environmental control. Though these increase initial costs, the goal is that over time the investment will pay off in lower turnover or higher productivity. More widespread, though, are changes related to addressing safety at the work site.

Throughout the offshore petroleum industry, employers and workers note increased attention to safety concerns, and this pattern persists in fabrication and shipbuilding as well (see also Chapter 6, this volume). Unlike work offshore, employment in the fabrication and shipyards is regulated by the Occupational Safety and Health Act (OSHA). Greater pressure to improve safety, though, comes from the customers seeking to do business with Gulf Coast yards. Increasingly, study participants reported, customers are asking about safety records and practices before signing contracts (VP081 2008). The COO for a mid-sized fabrication yard in Mississippi explained,

We’ve developed a very solid safety management system, in addition to project management. It’s very efficient... Especially in a very dangerous business, people work at heights and other things that are inherently dangerous where they could die if not approached right. We have a safety scorecard as you walk in; most companies hide those numbers. It’s posted on our website. The people and culture

of organization are committed to safety. Oil companies like that. They've driven it... We investigate the few accidents that we have, we understand the root cause. If we find a deficiency in the JRA [Job Risk Assessment] we change them, and our policies if needed. Or if we had the requirements adequately defined and the employee doesn't follow the precautions, then we go to disciplinary proceedings. I make them explain to me why they got hurt. No one likes those meetings. All the chain of command is there [lists everyone between the employee and the COO]. It's unpleasant, people don't like it, so they don't get hurt. It saves a huge amount of money. The largest cost savings is in insurance. We're not paying the workman's comp, the lawyers. We're producing the work and providing the service without the accidents. This puts us at a strategic advantage over our competition (VP083 2008).

Safety, and perceived safety, is closely linked to workplace drug and alcohol policies. Though the first efforts to curtail drug use of workers date back at least to the Federal Marijuana Tax Act of 1937, it was in the 1960s and 1970s that illicit drug use began to be seen as a major problem and a series of policy measures regarding employment and drug use were passed.

Impacts of workplace drug use (including smoking, alcohol, and other drug use) have been categorized as relating to availability or supply of labor, productivity of labor, and other (accidents, company reputation, legal liability, and workplace relationships), but few data exist to provide reliable estimates of the size of these impacts across workplaces (Godfrey and Parrott 2005; Alexandre and French 2004; Lange et al. 1994). Some studies have associated illicit drug use with higher rates of accidents or injury (Walsh and Hawks 1988; Crouch et al. 1989; Miller, Lestina, and Smith 2001; Shipp et al. 2005) while others have found no link (Normand, Saluards, and Mahoney 1990). Other problems attributed to employees who abuse drugs are increased likelihood of being late, of using sick leave, and of filing a worker compensation claim, though the impacts of workplace drug use vary across time and countries as labor markets, economic conditions, and labor market laws change (Godfrey and Parrott 2005).

Given the close ties of the Gulf Coast fabrication and shipbuilding industry to both the petroleum industry and the U.S. military, pressures for enacting workplace drug policies are intense. In the 1980s, the U.S. federal government determined that pre-employment drug screening should be an integral component of fitness-for-duty determinations conducted to ensure that new employees would be free of medical conditions that could interfere with their capacity to work safely, productively, and efficiently (Walsh and Hawks 1988). A 1985 survey of Fortune 500 companies documented an increasing trend toward the establishment of drug-testing programs among major corporations (Dunivant and Associates 1985, cited in Lange et al. 1994). Between 1986 to 1988, from 20% to 33% of all companies had some variety of drug-testing program in place and federally regulated industries, such as utilities and transportation, were more likely to use drug testing than were others (Walsh and Hawks 1988). The federal Drug-Free Workplace Act, passed in 1988, applies to all organizations and individuals who receive a grant from the federal government, and all federal contractors who take contracts of \$100,000 or more for work performed in the United States, and requires employers to certify that they will provide a drug-free workplace. Though the law does not require drug testing, such testing is implicitly authorized as a means to maintain a drug-free workplace (U.S. Department of Labor n.d.). A 1989 Bureau of Labor Statistics study revealed that 43% of the largest businesses (those with more than 1,000 workers) had drug-testing programs (Normand, Saluards,

and Mahoney 1990); by the 21st century, about 80% of large U.S. employers were using some form of drug testing (Ozminkowski et al. 2003). All mid-sized and large fabrication and shipbuilding companies in the study area had explicit drug policies and programs at the time of the study. Some managers argued that drugs had become less of a problem among their workers once they began drug testing.

When taken together, the factors discussed above contribute to ongoing challenges to recruit, train, retain, and advance employees in the fabrication and shipbuilding industry. The rest of this chapter is devoted to efforts to find and keep workers.

2.3. FINDING NEW SOURCES OF LABOR

Given that the fabrication and shipbuilding industries emerged, developed, and evolved in different locations across the Gulf and at different times (see community profiles in Volume II), there is no single pattern that reflects how the industry has recruited and maintained a labor force over time. In some cases, the industry developed slowly to serve other local industries, such as fishing, and its labor force grew along with it. In others, the industry got a huge boost from military activity and attracted large numbers of people to the area to fill jobs ranging from craftsman to engineer. During the period of this study, companies active in fabrication and shipbuilding along the Gulf Coast were employing workers with a wide variety of backgrounds and both present and historical ties to the industry. They drew upon the regular local workforce, prisoners on work release programs, workers they recruited from elsewhere in the United States, and authorized and unauthorized international labor.

2.3.1. Regular Local Labor

As noted at the start of this chapter, a major argument for developing, growing, and maintaining the fabrication and shipbuilding industry within and near communities along the Gulf of Mexico is that this industry provides good jobs for residents. When asked, employers and workforce development specialists generally argued that workers would commute up to 50 miles to work; this group of daily commuters is considered local labor for this report. Whether they were born within the region or migrated from elsewhere, once they take the job and move into the community, they become part of the community - sending their children to school, buying from local merchants, coaching sports teams, and leading Bible classes—and they become part of the local labor pool.

Especially when compared with other sectors in the Gulf of Mexico offshore petroleum industry for which workers regularly live outside the region and commute long distances, local residents make up a large percentage of fabrication and shipyard employees. Though a few companies have experimented with the rotating schedules, such as the seven days on and seven days off or 14 days on and 14 days off typical of work offshore, most still operate under five- or six-day workweeks. Indeed, as discussed above, many workers rely on overtime wages and therefore regularly report to work six days per week. Thus, workers have to live nearby in order to commute to work.

As discussed above, difficult and dangerous work, combined with the cyclical nature of the industry and the possibility of alternative employment, contribute to the high mobility of the local labor force, both among companies in this industry and to and from other industries. For workers, the level of mobility depends on their own skills and abilities, the community within which they are working and what other options are available to them there, whether or not their spouses have jobs and especially ones that provide health and retirement benefits, their family

and community obligations that keep them rooted in a particular place (see Volume II). In the Golden Triangle, Texas, for example, there are sufficient numbers of companies that require skilled craftsmen, and they generally fluctuate according to different cycles, so there is steady enough work to keep such workers employed (BM004 2008). Where in some places workers are drawn to better-paying or more stable crafts jobs in worksites such as refineries, in others they remain in fabrication and shipbuilding because it pays better than with employers such as seafood processors. Welders, pipe fitters, and electricians who work in shipyards have skills that are generally higher than those required by construction workers, so these individuals easily engage in trades outside shipbuilding, such as the construction of large commercial buildings or electric plants. Thus, there is sufficient volatility to keep workers potentially and actually on the move, and a key issue across the region has been the need for continual expansion of the labor pool.

The earliest mechanisms for expansion within the local labor force were to draw in agricultural workers, African Americans, and women. Of those, as noted above, women continue to be poorly represented in the labor force. In southern Louisiana, Native Americans gained access to industry jobs as well, though, due to their continued involvement in fishing, they have tended to enter the offshore petroleum industry by working on vessels (Wallace et al. 2001). In Louisiana, Mississippi, and Alabama, Asian Americans, too, have entered the industry though efforts to encourage a large-scale transition of fishermen into the shipyards have generally been unsuccessful (SB005 2007, DA009 2008). Especially in south Texas, Hispanics have made up a significant portion of the industry workforce. In general, the Hispanic population expanded across the study region following the 2005 hurricanes. While Hispanic shipyard workers had preceded that migration in many places, the Louisiana, Mississippi, and Alabama study communities nevertheless reported an increase in Hispanic employees after the storms. At the same time, as the color barriers have fallen in this and other industries, where more prestigious or desirable jobs were available in the community, these have served to draw workers away as well.

Many training programs that are specifically aimed at local workers have been developed by local and state governments to reduce unemployment or enhance vocational education, often in partnership with industry. Study participants discussed opportunities for individuals to work their way up from helper to fitter to welder if they were willing to take advantage of training and mentoring. Reflecting the sentiments expressed by many, but failing to acknowledge the nature of the available work, one shipyard manager noted, “If a man wants to work in this area, they can. Some just don’t want to work” (BM023 2008). Several participants admitted that programs aimed at local workers generally have had a small impact on addressing the needs of the industry. In addition, in some areas such as Port Arthur, Texas, these programs have been criticized for creating a lower tiered alternative for non-white students and citizens (SD008 2007).

Changing demographics and expectations for and of young people have played a major role in the problems employers have faced in attracting workers. According to a former shipyard boss, “If your father had worked in the shipyards for 20 years and you were an A student in math in high school, you were a shoe-in.” Apprenticeship programs helped prepare new workers for their jobs, though few such programs remain. This former boss argued that youth are no longer interested and no longer qualify, noting broader social changes as well, “I remember back when [co-worker] and I used to look through 400 applicants to choose a hundred and now we probably couldn’t get a hundred applications. Now the kids want to be something other than a shipyard worker, like a rocket scientist. . . . Of course, you had to pass the security test. You couldn’t be a

criminal or anything. But in those days you didn't even think about drugs. The worst thing that you could do was smoke a cigarette. Today, my goodness, you got to go have a urine test" (PP010 2008).

Though as noted above, concerns about drug use have been prevalent within the industry since at least the 1970s, numerous study participants argued that the combination of general worker shortages and increased liabilities and costs associated with worker drug use have made this a major problem. A pastor and labor advocate in Texas noted, "It's not just the price of oil [contributing to the labor shortages]. It's the cursed drug use" (SD014 2007). Efforts to identify workers who presented a danger were not always successful. As one secretary noted, "We do an initial screening but we haven't successfully implemented random testing here. We're working on it. A few months ago we did our first try, which failed miserably. We brought the sheriff here with some drug-sniffing dogs to check cars and stuff. But word had gotten out, so the guys we expected to find with stuff were clean; they'd tossed it. But one of our longest-term employees, an old guy who was embarrassed of a back injury and scared he wouldn't be able to work without taking care of it, had gotten some prescription pills on the street so he had them in his car, but he didn't have a prescription for them. He was arrested" (SR006 2008).

One shipyard manager referred to himself as a "second chance employer, "You see a lot of guys coming through the yard who can't pass their drug test, who may have a criminal record, and these guys are often excellent workers, they just need a chance to get started again" (BM023 2008). He noted that he and [a co-worker] looked around the yard one day and had a hard time finding someone without a record; on the day he was visited during this study he noted three guys in the yard were wearing tracker ankle bracelets (see Prison Labor below).

Despite the challenges, most employers noted they prefer to hire local workers. Especially in the smaller and medium-sized companies, many of those employers are from the area or have lived there for many years, and they have ties to their communities. Many spoke with pride of the outstanding craftsmen in their communities. One former Mississippi craftsman noted, "I knew some that used to work in the shipyard and some would even go up and work a second shift up in Escatawpa and then they would work on Saturdays and Sundays" (PP011 2008). His friend, a former shipyard manager, added, "Oh yeah, welders especially. Top-notch welders would do that. They could work anytime they wanted to. They would work 40 hours in the shipyard and work 24 hours somewhere" (PP010 2008).

A carrot used by many to attract young people to the industry was the promise of advancement. A Louisiana shipyard owner reported, "On the yard, we have evaluations at 30 days, and then again in a couple of months. Those are opportunities for pay raises. If a fitter or a tacker wants to be a welder, and he's paying good attention and practicing in some of the slower time—and of course we give him every opportunity to do that if we can, and all of his materials—he can move up in a year, a year and a half. [My son] keeps an eye on 'em and he works with the yard foremen and me to decide who's moving up...There are opportunities to move up in the administrative side too. Take [my niece], she started out in the supply room and now she's in accounting" (SR007 2008).

However, as some noted, not everyone was suited for jobs in engineering and management. A former Mississippi COO noted, "There were draftsmen, which required an associate's degree or something like that. Now they draft on a computer so it is completely different. [The company] would pay for classes, but you had to make A's, or you would have to pay part of the bill. Every lower grade down, you would have to pay more yourself. The production guys would be able to take classes to become associates if they worked in production for long enough. A lot

of guys knew what they could or couldn't do as far as the engineering procedures went, they just didn't know the technical reason. But it was amazing, because a lot of guys would want to be engineers because they saw them sitting in the air condition all day, but then they would not like it once they started doing it. They would think it was very boring. If they had to be in the office for three days a week they wouldn't be able to stand it and would quit" (PP012 2008).

Some companies reported that they took extra measures to retain workers. Smaller companies, in competition with larger yards that could pay more, argued that they tried to offer their workers a better environment. "We're a family business. I know my guys who've been here a while and I'd do—I've done—anything for them. Loaned 'em money to buy trucks, given 'em paid time off to help their wives when they're ill. There's a guy I'm working with the Sheriff in Thibodaux right now to help him out... So now the Sheriff has my man in jail for six months and I don't want to hire someone to fill his place because he's a hard worker, smart, loyal, and I want him to have a job when he comes back... He's sitting in jail awaiting trial when he could be here working for me! I called the Sheriff and said, 'I got boats to build. I need you to release this man on house arrest'" (SR007 2008)! Some managers who had worked in other industries noted they had seen labor strategies that would not have been acceptable in other industries within which they had worked. An office manager, for example, noted that she had seen people "walk off the job and disappear" and that despite being gone a month, six months, or even a year, when they come back they would always be hired back (BM011 2008). Not all companies are so flexible. A secretary for a small yard commented, "If someone wants to skip work a couple of days that's fine too. They cannot work at all. They have every opportunity to work out time with their foreman, or to leave a message on my machine, but if they don't show up for three days with no explanation, they're out" (SR006 2008).

As noted above, contracting companies have become an important step for many workers entering the industry; employees who work out may be offered permanent jobs with the shipyards themselves. Public and private social service agencies also feed workers into the stream. According to a labor contractor, "The Salvation Army tries, they send everyone who comes in to our office. So do some of the local churches, we try to help everyone. We want to be treated fair, and we treat everyone fair. We take machinists, electricians, pipe fitters, welders" (VP094 2008). Yet this same contractor noted that in their efforts to hire locally companies sometimes discriminate against more qualified workers, "They just look at the front cover sheet, maybe so they can call themselves. They discriminate. They only want good old country boys from George and Green Counties. If you have an address there you're hired, they don't care if you've been fired five or six times before" (VP094 2008).

As noted elsewhere (Austin et al. 2002), lack of loyalty was a persistent theme among employers. Though turnover has been a problem in the shipbuilding industry for decades, people in all study communities spoke of particular companies with which locals had identified and which were seen as providing the sort of good jobs that were coveted. It was at those companies, and for employees at all levels, that, in contrast to the years prior to the 1980s downturn in the offshore industry, study participants noted there was no longer strong identification with the industry or long-term employment opportunities. As longtime industry employees and managers noted, few employees will work from high school through retirement at the same company. Of course, few employers make it possible for this to happen anymore.

Despite talk of and programs to retain workers, employers shared how they used cutbacks and layoffs to cull and discipline their workforces. A secretary at a small yard observed, "Whereas we usually have three to four boats being built at a time, we only had one so everyone

cut back hours. We usually have a 51 and a half hour work week, but everyone cut back to just 40. And we laid off somewhere between a half and a third of our workforce. But it was useful, 'cause we got rid of the dead weight. I'd have felt worse if they were actually people who were doing stuff" (SR006 2008). A shipyard owner commented, "You know, I get to know these guys and I've known many of them through some hard times, so it's hard to lay them off even if they're not doing a lot. But with the cost of boat building these days, I can't afford to keep people around who aren't doing their job" (SR007 2008).

One advantage of local labor is that the company does not have to worry about providing housing, except in unusual circumstances such as immediately after huge storms. Several companies reported making arrangements to house workers immediately after Hurricanes Katrina and Rita. One company in the Golden Triangle, for example, located some rental properties in Orange, and some bunkhouses in Sabine Pass, and turned their rent houses into dormitories with kitchens, utilities, and other amenities. Employees who showed up for work were provided a bag of linens and toiletries. Company managers were pleased, though, to get out of the housing business after a few months as financing for repairs came through and their employees were able to find other living arrangements (BM004 2008).

In the years following the 2005 storms, a general lack of housing, along with high insurance costs which discouraged some from rebuilding, continued to be cited by fabrication and shipyard employers as an obstacle to local workers trying to return to the area, as well as to attracting newcomers (see below).

2.3.2. Local Prison Labor

The need for labor, especially to do difficult, potentially dangerous work, has led employers to develop partnerships with prisons and jails. A significant increase in incarceration in the United States during the 1980s and 1990s took many members of the U.S. working age population out of the workforce. During the 1990s, for example, the nation's jail population increased on average 4.6% per annum, though the rate had slowed to half that by the 1998 to 1999 period (Beck 2000). Though the rate of increase slowed again in the mid-2000s, it was not until 2010 when the U.S. prison population actually decreased 0.6%, the first decline since 1972 (Guerino, Harrison, and Sabol 2011).

All four states in this study have prison work programs (Mississippi Department of Corrections n.d.; Louisiana Department of Public Safety and Corrections n.d.; Alabama Industrial Development Training n.d.; Texas Correctional Industries n.d.; Levin 2008). The Mississippi Department of Corrections (MDOC) Community Services Division has four restitution centers, each housing an average of 64 residents. Residents serving their sentence at a restitution center work for businesses in the community to pay for their court-ordered restitution fines, room and board, and court costs (Mississippi Department of Corrections n.d.).

Louisiana, the U.S. state with the highest rate of incarceration and largest number of jail inmates per 100,000 (Beck 2000), has an extensive program for putting prisoners to work. The Louisiana Department of Corrections (DOC) has insufficient beds for its prison population, so inmates also live in parish jails, privately-run contract facilities, and for-profit work release centers. The work release program provides workers to the state and to private companies. The program was designed to offer a transition between the regimentation of institutional living and the freedom and responsibility that comes with release under only community supervision. It is also intended to enable inmates to earn a wage so they leave custody with some money. According to the Louisiana Department of Public Safety and Corrections (n.d.), based on five-

year recidivism data, inmates who transition from incarceration through work release are less likely to return to prison than other inmates. Inmates become eligible for work release within three years to six months prior to finishing their sentences. In the work release program they are paid at market-rate and are allowed to keep a portion of their earnings, which they can redeem upon their release. In Louisiana as across the United States, employers now have additional incentives for hiring prisoners who are classified as at-risk employees under the federal Work Opportunity Tax Credit program and for which they receive a tax credit of \$2,400 per hire and can earn back up to 40% of the wages they pay annually.

At one time in the study area, large companies that needed welders supplied instructors to the nearby prisons and had them teach the curriculum they taught at their industrial facilities and on their yards. When the inmates were released, the companies would try to draw them in to work for them. However, since September 11, 2001, no individual with a felony or violent misdemeanor can be hired to work in worksites such as refineries within 10 years of receiving the violation (SD006 2007). Access to jobs offshore is also restricted, though few of the region's fabrication and shipyards fall under the restrictions.

In Alabama, both Keeton Corrections in Spanish Fort and the Mobile Work Release Center in Prichard have agreements with a Mobile shipyard. Under an agreement similar to that of the St. Mary Parish facility, the shipyard is responsible for hiring workers; the work release program transports applicants and helps facilitate the employment process (Wilkinson 2008).

Louisiana fabrication and shipyards have been working with state prisons and jails for more than two decades, providing information to the correctional facilities about the techniques being used on the shipyards and donating welding machines and rods to the programs. Developed from a program of the Louisiana Department of Corrections that began in May 2005, the St. Mary Parish Work Release Facility had agreements with two Morgan City shipyards at the time fieldwork was conducted for this study (SC033 2008). The facility does not do any training; the companies test the workers and then hire them as needed. Though the work they do varies, because many of the prisoners have welding experience, not all are in low-skilled jobs. The workers receive contracts like any employee and are housed at the correctional facility, where they pay for their room and board. Probation and Parole Officers are responsible for monitoring the contract work release facilities and may conduct random drug screens and "random shakedowns of the facility" (Louisiana Department of Public Safety and Corrections n.d.). According to state statistics, approximately 10% to 20% of offenders remain with their employer upon release.

Louisiana's program was criticized in the aftermath of the *Deepwater Horizon* disaster because work release inmates were hired in the oil cleanup efforts, but it had received little attention prior to that time, despite the fact that this population had been doing work in offshore petroleum-related industries for many years. According to Captain Milfred Zeringue, warden of the Lafourche Parish Work Release Center, "Our work release inmates are shipped to centers around the state according to employer demand. . . . I have carpenters, guys riding on the back of the trash trucks, guys working offshore on the oil rigs, doing welding, cooking. Employers like them because they are guaranteed a worker who's on time, drug-free, and sober. . . . And," he adds, "because they do get a tax break" (quoted in Young 2010). A human resources manager who hired work release inmates commented to study researchers that he preferred those workers for the same reasons identified by Zeringue. He noted that his efforts to hire the workers after they had been released from prison sometimes failed because the workers could not maintain the habits that were enforced while they were incarcerated (SC039 2008). A young man who began

working on a shipyard while in prison spoke highly of the experience, noting that it provided him the chance to learn things (TB003 2007).

2.3.3. Other U.S. Workers: A Regional Labor Pool

The U.S. shipbuilding industry is national, but even where corporate ties link Gulf Coast yards to other places, the Gulf of Mexico region is distinct (see St. Pé 2008). Most of the U.S. workers recruited from beyond what is considered to be “local,” within a 50-mile commute, nevertheless came from within the Gulf Coast and are considered here to constitute a regional labor pool. Especially in Texas, this classification masks the fact that many workers initially entered the system from outside the region, and particularly from Mexico. Also, workers may come into the region to apply for jobs without intending to stay. According to a manager for a mid-sized shipyard in southeast Texas, “Some guys will come down from Dallas and sign in on the sheet, so they show up as people seeking work, but they don’t live in the area” (BM023 2008). In short, they inflate unemployment numbers but do not affect the actual workforce.

At various points in time, and particularly during World War II and the 1970s when much of the rest of the United States was in an economic recession, Gulf of Mexico fabrication and shipyards have drawn employees from across the country. Workers reported moving to find work from their earliest days in the industry. For example, a former shipyard worker noted, “When we finally ran out [of business] in ‘48, the last ship we built was headed down to Argentina and me and the one other guy left were laid off . . . I was an electrician’s apprentice. . . And after we were laid off we were tramping all over the country working. And after the Korean War, I got called back, and when I came back the shipyard told me to come back because they would make me a supervisor and three weeks after I came back they made me a supervisor” (PP011 2008). During this study, however, many employers noted that they had tried bringing in workers from elsewhere but, due to social issues those workers had experienced and the challenges of getting their families to relocate to the region, they generally restricted their recruiting to the U.S. South. The lower wages offered to Gulf Coast workers also affect their success.

Many companies in the study area operated yards in more than one community within the region. Some of these frequently transferred workers from one yard to another while others noted that their workforces were fairly distinct. A small number of study participants reported having worked in shipyards in Jacksonville and Tampa, Florida, but no research was conducted in those communities. Though the corporate headquarters for Atlantic Marine is located in Jacksonville, little movement between Jacksonville and Mobile was captured by the methods used in this study. Likewise, on November 18, 2008, the Tampa Port Authority voted to assign the long-term lease for Tampa Bay Shipbuilding and Repair Co. to an ownership group led by Gary Chouest, who renamed the facility Tampa Ship, LLC (Tampa Ship, LLC. 2009). This occurred at the end of data collection for this study, too late to have any noticeable impact on labor flows.

Even within the region, shipyard managers reported problems recruiting workers and had taken extensive steps to find employees. Many lauded Louisiana workers for their experience and skills, and Louisiana workers have been employed around the world, but both employers and employees noted that a good proportion of those workers are reluctant to relocate. For example, companies with yards in Texas and Louisiana noted the challenge of getting Louisiana workers to leave home to live in Texas (see Volume II). Both employers and employees described the arc of shipbuilding from Brownsville to Mobile, noting that wages generally increased as one moves from west to east. A public relations manager from a shipyard in the Golden Triangle noted his company had established recruiting stations in Orange, Houston, and Brownsville, Texas. Their

efforts in Brownsville had included a two-week advertising blitz and a hiring fair. Based on positive results, the company had developed “quite a pipeline” from Brownsville and “south Texas” to the Golden Triangle (BM004 2008). Across the Gulf, company managers and human resources personnel would refer to employees from “south Texas.”

The most common observation with regard to regional labor was that the communities all along the Gulf Coast had experienced a tremendous influx of Hispanic workers. Companies reported having tried a variety of strategies to deal with this workforce. For example, one company in the Golden Triangle reported that it was useful, and even necessary, to send their workers to English as a Second Language (ESL) classes at a local junior college, just to make sure that they were able to communicate (see also Section 2.3.4 below). They made resources for the class available to their workers, paid for the books and the tuition, and arranged with the junior college that the wives of the workers could go to the class as well, and several of their workers took them up on this offer (BM023 2008). When the applicant pool grew large enough, this manager reported that, due to communication problems, the company changed its hiring practices, requiring new hires to be conversant, though not fluent, in English. The company manager cited concerns with safety, general operations on the yard, and prior experiences with aggressive individuals who were at least partially bilingual and would exploit fellow workers who lacked sufficient English skills to know that others were taking advantage of them.

For the communities where the yards are located, an influx of non-local labor can increase demands on local infrastructure, especially housing. During the 1970s, large numbers of people were attracted by the high levels of activity in the offshore petroleum industry and the shipyards, leading to an upsurge in bunkhouses and labor camps; during the downturn of the 1980s, many workers who were unable to return home remained in them. In Louisiana, these facilities, which provide shelter, meals, access to work, and sometimes equipment such as steel-toed boots and hardhats, are considered boarding houses and range widely in kind and quality (Associated Press 1982; Higgins 2005). Some communities, such as Morgan City, adopted ordinances restricting the location of bunkhouses to company property. A former newspaper editor described the situation of the workers at the time, “They were here to work. They weren’t here to go to church, they weren’t here to coach the little league football and baseball teams, they weren’t here to sing at the Rotary Club meetings with the rest of the guys, they were here to make money in the oil patch. They didn’t live here, they didn’t care who the mayor was, they didn’t vote, they just wanted their paycheck. And while it was important, the community knew, for the labor to be available, it was also important that they not live next door to ‘em” (Shirley 2010). In contrast, the city of Orange, Texas, prohibits locating permanent housing within an industrial zone.

One labor contractor listed the options available in his community at the time of this study: “We have housing. We have a housing complex of townhouses. It’s gated. Some go to motels. If they have a family they rent a house for themselves, or two to four workers will rent them together and split it. Sometimes when they’re on the road they want their friends with them. We pay electricity and everything, then they reimburse us afterwards. If they’re terminated and go to other jobs, we let them stay, but they have to pay us. Some think they can live for free” (VP094 2008).

As noted above, housing shortages were exacerbated after the 2005 storms. Some of the companies received assistance from the Louisiana Department of Economic Development and the U.S. Federal Emergency Management Agency (FEMA) in setting up trailers and bunkhouses in locations across the Gulf. A manager at one yard noted, “I never wanted to get into the business of being a slum landlord, and now I’m dealing with housing stuff, with housing issues”

(BM064 2008). These facilities housed both U.S. as well as foreign workers, the latter brought to the United States on specialized visas.

2.3.4. International Labor: Immigrants and Guestworkers

As their ability to attract workers from local, regional, and even national labor pools has diminished, employers and labor contractors have turned their attention outside the United States. Shipbuilders may legally hire any individual authorized to work in the United States, both permanent residents and those authorized only to work for a specific employer (see also Donato 2004). Permanent residents may come from the local or regional labor pools discussed above. This section will focus on those workers who must be sponsored by their employers.⁸

The use of international labor contracting and guestworker programs to find for agricultural workers in the United States began in the 1800s and early-1900s and that use was expanded during World War II to include railroads and mining. This indirectly benefitted shipyards at the time because U.S. workers were then freed up to move into shipyards and other war-related industrial facilities. Following the war, the Immigration and Nationality Act (INA) of 1952, also known as the McCarran-Walter Act, was designed to address fragmentation in immigration law as it “collected and codified many existing provisions and reorganized the structure of immigration law” (U.S. Citizenship and Immigration Services 2009). The INA created the H-type visa, the primary guestworker, or “nonimmigrant” labor, visa category in the United States. The H-2 category was originally used mostly by agricultural employers but was expanded and continues to be “reinvented and reinterpreted with different drafts of immigration and labor market policy” (Griffith 2006:37). Along the Gulf Coast, the use of H-2B visa labor has been common among sugar and seafood processors, forest products companies, and casino and tourist industries since the program’s inception, but it was not until late in the 20th century that the H-2B visa was used in fabrication and shipbuilding.

Of the 79 different classification of immigrants and visas, there are six divisions of the H category: (1) H-1B, for foreign nationals involved in specialty occupations; (2) H-1C, for nurses to work up to three years in health professional shortage areas; (3) H-2A, for temporary agricultural workers; (4) H-2B, for temporary skilled and unskilled workers (the H-2B visa category allows U.S. employers in industries with peak load, seasonal or intermittent needs to augment their existing labor force with temporary workers; (5) H-3, for trainees; and (6) H-4, for the spouse or child of any H-1, H-2, or H-3 worker (U.S. Citizenship and Immigration Services 2011). The H-2B visa category also allows U.S. employers to supplement their existing labor force when necessary due to a one-time occurrence necessitating a temporary increase in workers. Typically, H-2B workers fill labor needs in occupational areas such as construction, health care, landscaping, forestry and forestry products, manufacturing, food service/processing, and resort/hospitality service.

The H-2B program has come under scrutiny, particularly in recent years. Employers claim that the regulations of the H-2B program are cumbersome and labor advocates argue that there is far too much room for exploitation of the workforce. To be approved for the use of H-2B visas, the employer must prove that the need is temporary, which means the employer’s need for the

⁸ The research team interacted with undocumented workers and employers who hired them but did not systematically inquire about the legal status of study participants and therefore cannot distinguish their experiences from those of other workers.

duties to be performed by the worker is a one-time occurrence, seasonal, peakload, or intermittent (USCIS 2009). The initial visa is valid for up to one year but may be extended. A worker, however, cannot exceed three consecutive years working on an H-2B visa. Employers are required to pay at least the prevailing wage rate but are not required to pay the adverse effect wage rate (AEWR).⁹ Additionally, unlike employers of H-2A, or agricultural, workers, H-2B visa employers do not have to provide housing or transportation.

The H-2B visa is subject to a cap of 66,000 visas per year. In recent years this has been a source of many attempts at legislation change and debate throughout businesses and industry. This statutory cap was divided into six-month caps of 33,000 in 2005. The Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Tsunami Relief provided that for 2005 and 2006, returning H-2B workers, subsequently known as H-2R workers, who had been counted against the cap in any of the prior three fiscal years were not to count against the cap in the current year (Bruno 2008). The John Warner National Defense Authorization Act prolonged this condition in 2007. This returning worker exemption expired in fall 2007. Subsequently, in the next few years, visa petitions met the cap of 33,000 for each half-year in a matter of days. There have been numerous H-2B returning worker bills brought to Congress, but as of the time of writing of this report, none has been passed. Some proposed legislation suggests the creation of new nonimmigrant visa worker categories, while others provide a path to residency for nonimmigrant workers.

An H-2B worker, once contracted and given a visa, must only work for the company for which she or he was hired. A worker who leaves the company and seeks employment in the United States without adjusting his or her visa is considered an unauthorized or illegal worker by the federal government. Nevertheless, the practice of breaking or jumping the visa is not uncommon.

One shipbuilder claimed his company had attempted to petition for visas in the 1980s and 1990s but was unsuccessful. As noted in Chapter 1, Volume I, the first use of the H-2B visa in Gulf Coast shipbuilding was in 1996-1997, during a labor dispute at Avondale shipyards, when Louisiana shipbuilders hired approximately 3,000 workers, mostly from Mexico and India, to work as welders, shipfitters, and electricians. In 1997, the U.S. Department of Labor determined that the positions could not be filled by H-2B workers because they were tied to shipbuilding contracts rather than seasonal demands of less than a year. Louisiana politicians pressured the Department of Labor and the shipbuilders redesigned the positions to last no more than a year, so in 1998, 715 workers were hired as welding trainers on H-2B visas (see Chapter 1, Volume I).

Despite the Louisiana shipbuilders' success, the use of the H-2B visa did not immediately lead to a wave of certifications. In 2000, Todd Pacific Shipyards Corporation in Seattle was certified for 50 welder fitters, but in the years after the 1998 decision only a handful of requests were approved. Table 2.1 shows the results of additional requests from Gulf Coast shipbuilders.

Within the Gulf Coast communities studied, H-2B visa workers were drawn from Mexico, Jamaica, the Philippines, India, Pakistan, Romania, and China. Some companies hired the workers directly; others worked through contractors. For the latter, each week the employer would provide a list of workers needed and the contract company would send them. Many companies drew on multiple contractors to fulfill their labor needs.

⁹ The AEWR is the minimum wage, set by the U.S. Department of Labor, that agricultural employers who hire workers on H-2A visas must offer and pay to both U.S. and foreign workers.

Between 1996 and 2001, nationwide, forest management contractors in the southeastern United States were the largest single category of employers in the H-2B program, employing 21% of the program participants (McDaniel and Casanova 2005). As shown in Figure 2.1, the distribution of H-2B workers among the various industries nationwide was relatively stable in the early years of the 21st century, but suddenly between 2006 and 2009, the fabrication and shipbuilding industry threatened to overtake the timber industry in terms of numbers of H-2B program participants employed. The figure includes certifications for H-2B visas for employers in the fishing industry for comparison because they represent a steady and significant source of requests for H-2B visa workers along the Gulf of Mexico. While the number of certifications in fabrication and shipbuilding remained lower than those in timber, note in Figure 2.2 the large number of requests from companies in those industries that were denied.

Table 2.1.

Early Requests for H-2B Workers for Gulf Coast Fabrication and Shipbuilding

Year	Company	City	Workers Requested	Action
1999	HATCO, Inc.	Garland, TX	15 arc welders, 56 shipfitters	Denied
2000	HATCO, Inc.	Garland, TX	100 arc welders, 175 shipfitters	Denied
2000	International Marine and Industrial Services	Gautier, MS	40 arc welders	Denied
2000	Freide Goldman Halter	Gulfport, MS	285 pipefitters	Denied
2000	Overseas Ship Services	Miami, FL	100 workers: pipe fitters, welder fitters, machinist apprentices, electricians, joiners, and metal fabricators	Denied
2001	Lomco Employment Services	Schriever, LA	125 welder fitters	Denied
2001	Ladnier-Hardy Services	Bayou la Batre, AL	10 metal fabricator assemblers	Certified
2001	Don Rhodes Welding Service	Houma, LA	20 machinists	Certified
2002	International Marine and Industrial Services	Gautier, MS	75 arc welders, 35 shipfitters, and 10 pipefitters	Denied
2002	Don Rhodes Welding Service	Houma, LA	6 gas welders	Certified

Source: U.S. Department of Labor 2009. Note that certifications do not substitute for actual entry; they provide a measure of demand.

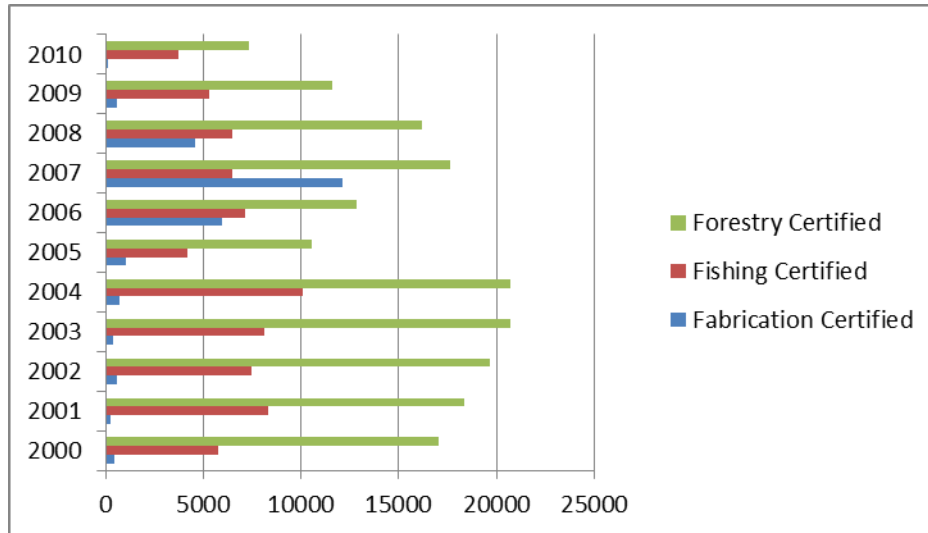


Figure 2.1. Certifications for H-2B Visas: Timber, fishing, and fabrication and shipbuilding industries

Forestry includes forest workers and tree planters. Fishing includes fishers, shuckers, cannery workers, processors, fish cleaners, and fishing vessel deckhands. Fabrication includes fitters, welders, metal fabricators, pipe fitters, riggers, and structural steel workers.

Source: U.S. Department of Labor 2009. Note that certifications do not substitute for actual entry; they provide a measure of demand.

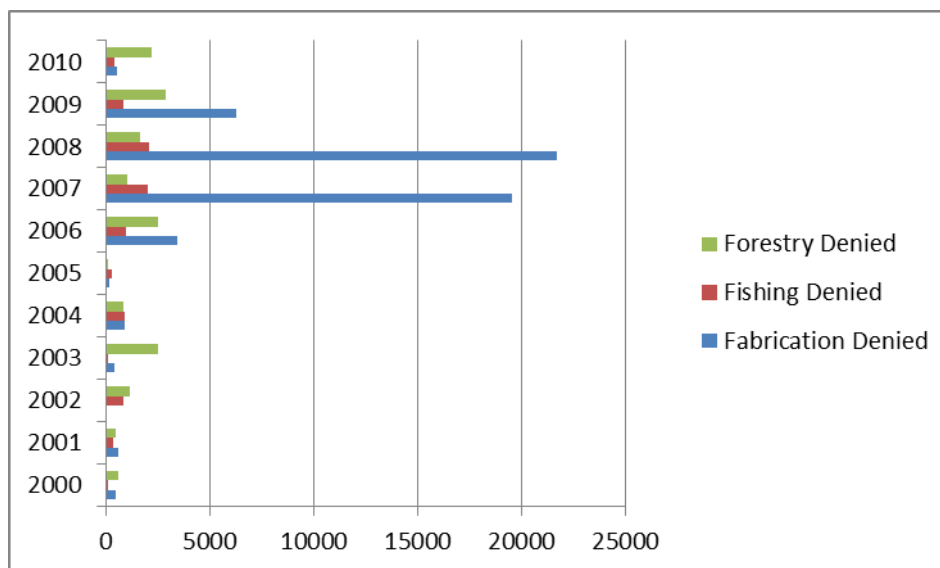


Figure 2.2. Denials of H-2B Visas: Timber, fishing, and fabrication and shipbuilding industries.

Forestry includes forest workers and tree planters. Fishing includes fishers, shuckers, cannery workers, processors, fish cleaners, and fishing vessel deckhands. Fabrication includes fitters, welders, metal fabricators, pipe fitters, riggers, and structural steel workers.

Source: U.S. Department of Labor 2009. Note that certifications do not substitute for actual entry; they provide a measure of demand.

This rapid increase was driven by changes in both labor supply and labor demand that were consequences of the 2005 Gulf hurricane season. Though, some employers noted that they were unable to hire any foreign nationals when they were doing certain types of work for the U.S. government (VP083 2008), nearly all employers with workers on H-2B visas named the 2005 hurricanes as the reason they began using the visas. Also during that period, the cap on H-2B workers was artificially removed because returning workers were not counted against the cap. According to a human resources director for a large shipbuilder, “The crunch started around Katrina. Maybe because the workforce left or because there was so much work in offshore because of all the repair [work]” (SR004 2008). In Mississippi, a company representative cited FEMA work as drawing workers away from the shipbuilding and fabrication industry: “They affected without realizing it...they were hiring at higher prices to aid in rebuilding, even people to hold signs. That put an upward pressure on wage system and a number of workers left to chase debris removal” (VP080 2008). Other companies noted that the excess work justified the need for importing labor. “After Katrina you can work as much as you want. The contracts are backed up for months. Nobody who wants a job is without one” (JC021 2007). Even several years after the 2005 hurricanes, much of the world throughout the Gulf can be traced to Katrina or Rita, as noted by a Louisiana employer: “After Katrina struck we had a big surge in repair. Even our business today is a direct effect of Katrina and it still will be for a while” (SR025 2008). Workers in Louisiana, too, noted that prior to “the storms” the workforce was primarily white and black, with few Mexicans. “But after the storms we’ve seen a whole lot more foreign people coming into the industry” (JC006 2007). Workers either were no longer in the area, or if they were, many chose to work in repair jobs and offshore, where more money was to be made. Finding themselves in a bind with few of the younger generation prepared to fill in the gaps, companies in the Gulf Coast looked overseas to ameliorate their situation and remain profitable.

As indicated in Table 2.1, Gulf Coast shipbuilders were employing workers on H-2B visas in one of two ways. Some went through the process of becoming certified and hiring the workers themselves, working directly with labor contractors in the sending countries, and others worked with labor contractors in the United States who had been certified to hire and employ workers on these visas. Some companies place most of the responsibility of locating laborers on the brokers. Others take a more active role, as a Louisiana employer explained: “We form relationships with agents in that area. For example, once the Romanian agent developed a pool of applicants, [another HR manager] and I went with four craft superintendents and we tested 262 people in 2 days and then made offers for skilled workers. Shipfitters, pipe fitters, structural welders, and pipe welders.” His company was shifting away from H-2B workers but he argued, “Same thing will happen in Puerto Rico. You can’t just go into a country—you have to have an agency relationship there” (SR004 2008). A recruiter for a mid-sized shipyard with a number of large, permanent help-wanted signs dotting the area highways also described the process of moving to H-2B workers, “First you advertise in the city you need the workers . . . and you wait several days, and the job services hold the phone number to see who calls about the job and who could work. Then you find out how many people call, but few ever do . . . then you refer the information to Baton Rouge, and then after a day, you can recruit from Mexico” (BM143 2008).

While many of the needs of guestworkers in the shipbuilding and fabrication industry are the same as those of other workers, they may not be manifest the same way. For example, all employees must receive wages and must get access to housing, transportation, and food. And all, including foreign laborers, must be covered by workman’s compensation insurance. Like their U.S. counterparts, guestworkers are working primarily for the wages, which they frequently

transfer home. Though at the time of the fieldwork for this study average wages for foreign labor were reported to be around \$14 an hour (BM074 2008), because workers sign contracts before they leave home, differences were observed based on country of origin, community, and company. At the same time, because of variances in how much money was taken out for housing, transportation, and other necessities, workers did not always receive the wages they were reported to be making (see Section 2.3.4.1 below).

Though employers did not report that they had specifically sought out workers to avoid drug problems, some commented that a benefit of employing guestworkers was that those workers passed the drug screens. The director of human resources for a mid-sized shipyard observed, “We did pre-employments on all of the Romanians and every one of them tested negative. I was talking with one of their interpreters, who’s now a foreman here, and he told me he knew it was going to be that way because in Romania if you’re caught with an illegal substance you’re looking at 25 years in jail. That’s a heck of a deterrent, which young people aren’t looking at here in the U.S.” (SR004 2008). Between their attitudes toward and experience with drugs, fear of the consequences of getting caught with them, and the level of surveillance many faced, guestworkers had plenty of reasons to avoid drugs. Like their U.S. counterparts, though, many regularly used alcohol.

Many of the workers encountered in the Gulf of Mexico had considerable experience working in guestworker programs across the globe. Chinese workers in south Alabama, for example, compared their experiences in different countries and noted that though they were treated poorly in the United States in comparison to their experiences elsewhere, their wages were better in the United States. As one Chinese resident who had befriended some of the workers noted, “Quite a few had been in Japan, Korea. They said in Japan it was so nice. They had their own room, with a fridge. In Korea, too. Their living conditions were better in both places. But, the pay here was better. They were not complaining. . . . What they make here in a week is what they make there in a month. That’s the real allure for coming here” (SA018 2008).

Yet, a Mexican American welder from Corpus Christi working on a Louisiana yard with H-2B workers observed, “I get \$12 an hour now plus overtime but I can jump up if I become a welder. The Filipinos are getting screwed, though! They only make \$5 an hour for class 1 welder!” This individual was unaccustomed to being provided housing, though, and spoke favorably of the arrangements, “They cook for us, and we can also cook for ourselves. They do our laundry too. It’s awesome. You put your clothes out by 6am, they’re done by 5pm. It’s a really good deal. They do all this stuff for you and then you can work overtime and not worry about having to do your errands. It’s a really good deal” (SR008 2008).

2.3.4.1. Housing

In general, while concerns about wages and fees that workers had to pay were not uniformly expressed, housing was mentioned by almost everyone, employers and workers alike. In contrast to the H-2A program, the H-2B program does not require employers to provide housing. However, especially due to the lack of adequate housing following the 2005 hurricanes, many employers did make arrangements to house their workers. As is common at the bunkhouses and labor camps in the region, as well as among employers of H-2B workers, companies that provided housing generally charged a weekly rate for room and board, taking the money directly from the workers’ paychecks. Living arrangements include barrack-style buildings, trailers on and off the yards, and blocks of motel rooms. According to one employer, “I’ve got them a place to live there, two trailers I rent them . . . I give them a place to stay and charge them 25 dollars a

week to stay in the trailers. They live right on the grounds, right in the shipyard They live together and share the expenses” (HG011 2007).

A southeast Texas yard that hired workers from Mexico contracted sections of a local motel for a limited time until workers developed networks and friendships and found places they would prefer to live. One individual who established a labor contracting service and recruited workers converted what had been his mother’s house into a bunkhouse, putting four workers to a room and charging them each \$400 a month rent plus \$1 an hour for access to a driver for every hour they worked, whether or not they used the driver. The workers were under a contract that said they were paid \$30 an hour, but the labor contractor took \$12 an hour, leaving them \$18 an hour before housing and transportation costs were taken out. Like most laborers in the region, the workers attempted to earn higher pay by working overtime (SA018 2008).

Some community leaders became actively involved in decisions about where and how to house H-2B workers. For example, upon receiving its second request from local shipbuilders to allow on-site housing within an Industrial Zone where permanent housing is prohibited, the city of Orange, Texas had representatives from its fire, police, and public works departments, and code enforcement division, review the permit application and tour the proposed site. Prior to the arrival of the guestworkers, the city manager prepared a memo for the City Council, informing the council members of the types of workers being sought, the wages to be paid, the cost they would be paying for housing and per diem, the medical insurance that would be provided to the workers, and the steps the company had taken to advertise for local workers (communications with Pipefitters Local 195 and ads in three local papers and the *Houston Chronicle*). The memo also addressed potential concerns about the safety of personnel and emergency workers responding to calls at the site, entertainment, the provision of translators for non-English speaking workers when they were off the property, and access to the site (see Appendix D). The memo recommended that the City Council approve temporary housing for a period of 18 months, subject to review at that point and provided specifications for the trailers to be used for housing. The memo noted, “The Golden Triangle area is experiencing economic growth that it has not experienced in this area in a long time. In order to address this growth, Council is being asked to approve something it would not consider during normal economic activity” (Oubre 2006). Attention to such details about the workers’ housing grew out of close relationships between city personnel and leaders of the Interfaith Worker Justice organization (SD009 2007; SD014 2007).

In other communities, researchers for this study found little if any evidence that the initial decision to create worker housing or house workers on company property raised the concerns of any local officials. Many company officials argued that what they provided and charged was decent and fair. For example, one company official noted, “We invested 7 million in 2 camp facilities I guess that would be ‘foreign worker resident houses.’ We went out of our way to do it right. They’re new facilities with lounges, TVs, satellite TV with programming from India” (VP083 2008). Still, in some instances workers and/or local residents questioned the housing conditions. Workers equated living conditions in worker housing from something that was merely inconvenient for commuting purposes to something that was prisonlike. Residents, too, commented that the workers were “locked up in the compounds” and “chained in a room except when they work” (BM007 2008; Crosthwait Field Notes May 18, 2008; SR026 2008). One social service provider noted that the housing facilities on the yards were generally “behind barbed wire” and described yard-owned residential facilities as ranging from “unethically terrible to moderately tolerable” (SR026 2008).

For security, most shipyards are surrounded by barbed wire fences and under constant watch, which means that those housed on the yards feel they, too, are always under surveillance. A worker living in facilities on a shipyard commented, “It is like a prison here. We can’t go out. Only to Wal-Mart for one hour a week, that is all. We can do no socializing, no drinking. We just sit here—we are like prisoners” (JC015 2007). In Pascagoula, Indian fabrication workers housed in company barracks began to raise concerns about their conditions soon after their arrival. Those concerns were not immediately made public, but the situation soon escalated to include walk-outs, lawsuits, and a ruling that about 150 workers had been subject to involuntary servitude and therefore were entitled to visas set aside for victims of human trafficking; though a lawsuit was still pending against the company, in 2012 a U.S. federal judge denied the workers class certification in the case (see Austin Forthcoming). At the height of the activity, the protests and lawsuits had repercussions for other companies and workers. In one case, after a Jamaican worker complained about working conditions, the labor recruiter informed all the Jamaican workers he had recruited, and the companies they worked for, that they would be sent home. Both employer and employees expressed frustration and anger over that situation.

From the employer’s perspective, housing workers on site, and accompanying them on shopping and socializing trips, gives shipbuilders control and oversight of their guestworkers, allowing them to ensure that the workers do not jump their visas and protecting their investments of time and money necessary for bringing the workers to the United States and their particular yards. As with providing housing for U.S. workers who live in bunkhouses and labor camps, company housing facilitates connecting workers and jobs and avoids competition with local residents for limited worker housing. A representative for a Mississippi shipyard claimed, “We did this [provided worker housing] for two reasons: first, they wouldn’t know how to find housing in town and get to work, and second it was right after Katrina and the little housing there was needed by local community members. We didn’t want to take it up with the workers” (VP065 2008).

Regardless of the reasons for housing workers in one type of facility or another, the type of housing that was provided was a visible indicator to the workers and everyone else in the community of their status. Rather than being treated as the skilled professionals that many of the H-2B workers understood themselves to be, for the most part, in the Gulf region, these workers were treated—by the companies and also the communities in which they were living—as common laborers. Not surprisingly, some H-2B workers expressed a clear preference for living on their own. Some personnel directors seem to understand that preference, such as the example above where a shipyard in Texas provided short-term housing until the workers found places on their own (RC072 2008).

Some fabricators provided transportation for their H-2B workers, both to travel to and from work and to make trips to buy necessities. On-site housing eliminates the need for transporting workers to the job, but those individuals still need to travel to shop, send money home, and visit medical facilities. A major complaint of some H-2B workers was that they did not have regular access to banks and other services to which they are legally entitled, forcing them to use more expensive wire transfer services. Combined with a need to walk to and from work and stores, especially when they are visibly different from local residents, the need to keep and carry large amounts of cash also made the workers potential targets for robbery. Indeed, a group of Chinese H-2B workers was robbed several times at the house where they were being lodged (SA018 2008). Some contractors who provide H-2B workers for more than one yard house the workers in a single facility and then transport them about. One labor contractor noted, “We have 6 vans, we

provide transportation to all the job sites. When they choose to ride the vans they pay \$30 a week. If they work 5 days, if they work 7 days, it stays the same. We give them some help out because of the gas prices. If they were driving to Mobile it would be \$50-60 a week in gas. We're fully insured and if the van breaks, we get another van out to them, bring that one home and fix it" (VP094 2008).

2.3.4.2. Concerns with Participation in the H-2B Program

The decision to use workers on H-2B visas was not without problems. Most employers who participated in the study noted that involvement in the H-2B process was not a money-saving venture. According to one employer, "It's not economically a smart thing to do. Because we pay them the same; we train them the same; we treat them the same. From an economic standpoint, we're not saving any money. At least we don't. I've heard a ton of stories about other guys that try to pay less" (RC057 2008). Even with the help of specialized lawyers, brokers, and agents, the process complicates the work of human resources personnel.

Also, due to strong community ties, many employers, particularly small and mid-sized ones, expressed reluctance in hiring foreign workers. One labor contractor based in south Texas but providing labor in the Coastal Bend explained why his company did not hire H-2B workers: "There are plenty of residents, citizens available right now. We haven't tried to go into visas, it's too . . . I don't know . . . too complicated. All those procedures and things. We haven't tried. We've been doing good with the guys, the residents and everything. There's a lot of contractors who go in for visas, they bring Indian guys . . ." (RC019 2008). A labor recruiter for a contract company that did not use guestworkers reflected on the tensions: "At the old company I worked at, we had 150 guys, and we were making a killing on H-2B work, but a lot of times you have a trained welder on unemployment and a guy on a visa doing that job—it seems like maybe we should kick the visa guys out" (BM139 2008). Still, other employers argued that bringing in foreign labor was their only option for remaining viable when lack of a workforce could mean loss of a contract or even closure: "Hiring is just different now. And it's not just in the craft positions. But in craft, they're just not making them anymore. We don't want to bring in H-2B visa Mexicans; we want everyone to be from there. But it's just not possible" (RC072 2008). An employer in Louisiana commented on a peer, "I asked the owner's son why they weren't hiring Americans and he said they can't find any good American to do the job, they're taken already" (HG019 2007).

2.3.4.3. Matching Workers and Jobs

Some employers noted that they put significant effort into the process of recruitment and hiring to reduce problems down the line. A key concern was that the workers' skills would be overrated and both the worker and employer would be left in a bind, economically, due to costs to train workers or those that workers would lose if they were sent home, and legally, if the worker leaves the company and tries to find work elsewhere. Unfortunately, due to the huge labor demands in the Gulf region from 2005-2008 and the dire economic situation of many foreign workers, reporters and other workers reported that many workers arrived lacking skills necessary for work in the shipbuilding and fabrication industry. In some cases, the skill mismatch was due to differences in the equipment the craftsmen used. In response, a Mississippi yard reopened its training facility rather than send all of its H-2B workers home (PP029 2008). Some workers who arrived with inadequate skills were sent home; employers argued that the short-term nature of the H-2B visa did not justify spending months training workers who would

have little time to use their skills. According to one employer, “They didn’t have the skills. It was unfair to the other employees. The lawyers said send them back” (VP083 2008). Of course, employers could also argue that they were sending workers home for lack of skills when they simply needed to reduce the size of the workforce. In an industry with constantly fluctuating workforce demands and a reputation for using everything from drug screens to safety violations to terminate employees without having to announce layoffs, this possibility was also acknowledged by workers and some employers as well.

A key challenge in the employment of H-2B visa workers is communication. Some such as this Mississippi employer argued that skilled workers did not have to speak English: “It’s a lot easier to have a welder who doesn’t speak English. All you have to do is point and a first class welder knows what to do” (VP065 2008). Still, many others pointed to safety concerns related to having people on the yard who could not communicate with one another. Many Gulf Coast shipyards have become accustomed to Spanish speakers; indeed, Spanish is the primary language on many yards. According to a long-time worker serving as a consultant for a major fabricator at the time of this study, “. . . you have to speak Spanish to work in a shipyard these days. It’s different as you move along the Gulf Coast—but down here [Morgan City], and especially over to Brownsville—you have to speak Spanish. From Brownsville to the western side of Mobile, it’s all Spanish speaking” (BM102 2008). Managers, though, and those in non-craft labor positions, still speak mostly English, frustrating communication on the yard.

The increase in use of guestworkers amplified this problem. At one mid-sized shipyard, all managers were required to attend occupational Spanish language classes.¹⁰ Companies also depend on the use of translators and bilingual supervisors, such as a yard in Mississippi where “a lot of the guys on the yard don’t speak English, we have translators for Spanish, Hindi, and Vietnamese. They’re put on crews with other speakers of that language, or a foreman who speaks it a little. Otherwise you have a problem telling them what to do or if they’re being unsafe. They communicate a lot with hand signals, and both sides learn a little of the other language” (VP065 2008). The lack of English language skills deters some employers from hiring H-2B workers. Especially for smaller companies with fewer workers, hiring interpreters may be cost-prohibitive (SR025 2008).

2.3.4.4. An Abrupt End

As was shown in Figures 2.1 and 2.2, between 2007 and 2010, after a fairly rapid rise in demand, with much of that demand met by certifications, certifications came to an abrupt halt and the number of requests dropped soon afterward. What explains the rapid decrease? Despite the general economic downturn in the United States, construction of rigs and naval vessels continued into 2009, buoying the economies of the coastal communities. Amid signs that rig demand would be slowing (Kammerzell 2009), the Gulf Coast employment picture still looked generally good (Judge 2009). Nevertheless, climbing unemployment rates in other regions, along with a return of many area residents to the coast, increased the pool of workers available to employers. By 2010, even before the Deepwater Horizon disaster in the Gulf of Mexico, the economic recession was being felt more broadly and employers were laying off workers. As noted above, often the H-2B visa workers were the first to go (see also Soni and Castellanos

¹⁰ Occupational Spanish is oral, non-grammar based with a highly-focused and job-specific content (Command Spanish, Inc. 2009).

2010). While this contributed to a reduced demand for H-2B labor (see Legendre 2009), it alone does not explain the rapid drop.

Instead, deliberate effort by workforce development officers at the State Workforce Agencies led to the near-sudden halt in certifications for H-2B labor. At the Louisiana Workforce Commission, for example, a veteran staff member was given responsibility for the foreign labor certification program in 2008 (DA010 2010). She immediately began working with union representatives to monitor job postings for workers in this industry. Together they would gather resumes of U.S. citizens qualified for the positions and then forward those to the National Processing Center with the recommendation that the certification be denied. This process was repeated in all four Gulf states where H-2B workers had been employed in the fabrication and shipbuilding industry. The results were almost immediate. Beginning in 2009, all requests for certification were denied.

2.4. SUMMARY AND DISCUSSION

Fabrication and shipbuilding have long been characterized by labor shortages, and none of the options described in this chapter fully addressed those shortages. Over the years, the strategies for attracting and keeping workers have included manipulating workers' hours; providing training; establishing programs in local high schools to attract young people; establishing programs with local prisons to train and employ individuals in work release programs; developing and implementing national recruitment campaigns; attempting to make the workplace more comfortable such as by enclosing outdoor work areas; adopting measures to increase safety; developing modular systems that allow components to be constructed overseas and then brought to Gulf yards to be assembled; increasing mechanization of routine tasks; and diversifying to include specifically African Americans, women, Asian Americans, and, most recently, Hispanic workers. All of these approaches have been met with some success, but none have solved the problem arising from the fluctuating need for hundreds or thousands of workers.

In most yards, especially the larger ones that employ more than a dozen or so people, workers of different legal status and classification are commonly grouped together. During the study, these included U.S. citizens living in the communities, U.S. citizens who commuted from elsewhere in the region and returned home periodically, U.S. citizens living in prison, H-2B workers, permanent residents, and undocumented workers. When the H-2B workers came from countries that already supply large numbers of immigrant workers to the industry, they drew little attention.

Despite the apparent uniformity of the H-2B program, its manifestations at the local level are highly diverse. Across the seven study communities, prior experience with the H-2B program ranged from very extensive to almost non-existent. Because the communities have lived with and supported the shipbuilding industry for many decades, they are accustomed to the ups and downs of the industry, the large-scale efforts to hire workers and the massive layoffs, and the recruitment of workers from beyond their borders. In some places, the recruitment and arrival of workers from outside the United States drew attention while in others it was hardly noticed.

Generally, employers argued that their negative experiences with the program led them to abandon it as an alternative. Yet, at least one large shipbuilder continued to request H-2B workers into 2010.

2.5. REFERENCES

- Alabama Industrial Development Training. n.d. Alabama Work Release and Prison Reentry. Internet website: <http://.aidt.edu/work-release-and-prison-reentry/>. Accessed August 18, 2011.
- Alexandre, Pierre Kébreau, and Michael T. French. 2004. Further Evidence on the Labor Market Effects of Addiction: Chronic Drug Use and Employment in Metropolitan Miami. *Contemporary Economic Policy* 22(3):382-393.
- Allen, Ruth A., George N. Green, and James V. Reese. 2011. Labor Organizations, Handbook of Texas Online. Texas State Historical Association. Internet website: <http://.tshaonline.org/>.
- Associated Builders and Contractors, Inc. 2011. About ABC. Internet website: <http://.abc.org/abc.aspx>.
- Associated Press (AP). 1982. Trying to Survive at the Company Bunkhouse. *The Telegraph*. May 19.
- Austal. 2009. Austal Opens New Shipbuilding Facility. Internet website: http://.austal.com/cfm?_E3AA2-65BF-EBC1-29AF6515E737B65A.
- Austin, Diane E. 2008. History of the Offshore Oil and Gas Industry in Southern Louisiana. Volume III: Morgan City's History in the Era of Oil and Gas: Perspectives of Those Who Were There. OCS Study MMS 2008-044. U.S. Department of the Interior, Minerals Management Service, Gulf of Mexico OCS Region. Internet website: <http://.gomr.mms.gov/////pdf>.
- Austin, Diane E. Forthcoming. Guestworkers in the Fabrication and Shipbuilding Industry along the Gulf of Mexico: An Anomaly or a New Source of Labor? In: David Griffith, ed. *Mismanaging Migration: Captive Workers in North American Labor Markets*. Santa Fe: School for Advanced Research Press.
- Austin, Diane E., Karen Coelho, Andrew Gardner, Rylan Higgins, and Thomas R. McGuire. 2002. Social and Economic Impacts of OCS Activities on Individuals and Families: Volume 1. MMS 2002-022. U.S. Department of the Interior, Minerals Management Service, Gulf of Mexico OCS Region. Internet website: <http://.gomr.mms.gov/////pdf>.
- Beck, Allen J. 2000. Prison and Jail Inmates at Midyear 1999. Bureau of Justice Statistics Bulletin. U.S. Department of Justice, Bureau of Justice Statistics. NCJ 181643. Internet website: <http://.ojp.usdoj.gov/////pdf>.
- BM001. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Ben McMahan. Manager, fabrication yard. Orange, TX. March 10.
- BM002. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Ben McMahan. Manager. Port Arthur, TX. March 11.

- BM004. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Ben McMahan. Public Relations. Orange, TX. March 12.
- BM007. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Ben McMahan. Secretary Treasurer. Port Arthur, TX. March 17.
- BM011. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Ben McMahan. Office Staffer. Sabine Pass, TX. March 20.
- BM023. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Ben McMahan. Accounting and Management. Orange, TX. April 22.
- BM025. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Ben McMahan. Welding director. Orange, TX. April 24.
- BM064. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Ben McMahan. Contract Division. Amelia, LA. June 10.
- BM074. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Ben McMahan. Concierge. Morgan City, LA. July 1.
- BM087. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Ben McMahan. Manager/Engineer. Morgan City, LA. July 14.
- BM102. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Ben McMahan. Consultant. Morgan City, LA. July 24.
- BM139. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Ben McMahan. Recruiter, Labor Contractor. Morgan City, LA. October 15.
- BM143. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Ben McMahan. Recruiter, Shipyard. Morgan City, LA. October 17
- Bruno, Andorra. 2008. Immigration: Policy considerations related to guest worker programs (RL32044). Washington, DC: Congressional Research Service. Internet website: <http://ilr.cornell.edu/workplace/>.
- Bureau of Export Administration (BXA). 2001. National Security Assessment of the U.S. Shipbuilding and Repair Industry. 003-009-00719-4. Internet website: http://bis.doc.gov/_and_repair.pdf.
- Command Spanish, Inc. 2009. What is Occupational Spanish? Internet website: <http://commandspanish.com/html>.
- Crouch, D.J., D.O. Webb, L.V. Peterson, P.F. Butler, and D.E. Rollins. 1989. A Critical Evaluation of the Utah Power and Light Company's Substance Abuse Management Program:

Absenteeism, Accidents, and Costs. In: S.W. Gust and J.M. Walsh, eds. *Drugs in the Workplace: Research and Evaluation Data*. Rockville, MD: National Institute on Drug Abuse Research Monograph 91.

DA009. 2008. Personal communication. Southeast Asian Community in Southern Alabama. Discussion with Diane Austin. Director, Community-Based Organization. Bayou la Batre, AL. October 29.

DA010. 2010. Personal communication. H-2B Visa Program in Louisiana. Discussion with Diane Austin. Labor Official, Louisiana Workforce Commission, Baton Rouge, LA. July 21.

Donato, Katharine M. 2004. *Labor Migration and the Deepwater Oil Industry*. OCS Study MMS 2004-057. U.S. Department of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, LA.

Dooley, Channing R. 2001. *The Training within Industry Report 1940-1945*.

Advances in Developing Human Resources 3(2):127-289.

Godfrey, Christine and Steve Parrott. 2005. *Extent of the Problem and Cost to the Employer*. In: Hsmid Ghodse, ed. *Addiction at Work*. United Kingdom: Gower Publishing.

Gregory, Chester. 1974. *Women in Defense Work during World War II: An Analysis of the Labor Problem and Women's Rights*. New York: Exposition Press.

Griffith, David. 2006. *American Guestworkers: Jamaicans and Mexicans in the U.S. Labor Market*. University Park, Penn State Press.

Guerino, Paul, Paige M. Harrison, and William J. Sabol. 2011. *Prisoners in 2010*. Bureau of Justice Statistics Bulletin. U.S. Department of Justice, Bureau of Justice Statistics. NCJ 236096. Internet website: <http://.ojp.usdoj.gov////.pdf>.

Gulf Island Fabrication, Inc. 2007. Annual Report. Internet website: http://.gulfisland.com//_Report.pdf.

Gulf States Shipbuilders Consortium. 2011. Home page. Internet website: <http://.gsship.org/>.

Gulf States Shipbuilders Consortium. 2008. Initiatives. Internet website: <http://.gsship.org/.html>.

Havens, April M. 2011. *Union workers accept Ingalls Shipbuilding's 3-year contract extension*. The Mississippi Press. December 2.

HG005. 2007. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Heather Gallivan. Former fabrication worker. Montegut, LA. June 20.

HG011. 2007. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Heather Gallivan. Shrimper. Chauvin, LA. June 25.

- HG019. 2007. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Heather Gallivan. Welder. Chauvin, LA. July 3.
- HG025. 2007. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Heather Gallivan. Fitter. Chauvin, LA. July 19.
- Higgins, Rylan. 2005. Bodies for Rent: Labor and Marginality in Southern Louisiana. *The Anthropology of Work Review* 26(3):12-22.
- JC006. 2007. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Jacob Campbell. Fitter. Galliano, LA. July 16.
- JC015. 2007. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Jacob Campbell. Welder. Galliano, LA. July 23.
- JC021. 2007. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Jacob Campbell. Welder. Larose, LA. July 28.
- Judge, Phoebe. 2009. Shipbuilding Industry Hiring Despite Economic Downturn. Mississippi Public Broadcasting. Internet website: <http://.mpbonline.org//mississippis-ship-building-industry-remains-strong-despite-recession>.
- Kammerzell, Jaime. 2009. Jackup count increases along with uncertainty. Offshore. July 1.
- Lange, W. Robert, B. Rodrigo Cabanilla, Gerri Moler, Diane L. Frankenfield and Paul J. Fudala. 1994. Preemployment drug screening at The Johns Hopkins Hospital, 1989 and 1991. *American Journal of Drug and Alcohol Abuse* 20(1):35-46.
- Legendre, Raymond. 2009. Recession causes drop in foreign workers. Houma Today. October 29.
- Levin. Marc A. 2008. Work release: Con job or big payoff for Texas? Policy Perspective, Texas Public Policy Foundation. Internet website: http://.texaspolicy.com//_workrelease-ml.pdf.
- Louisiana Department of Public Safety and Corrections. n.d. Work Release. Internet website: <http://.corrections.state.la.us/.php?=&id=>. Accessed August 18, 2011.
- Louisiana Workforce Commission. 2011. Frequently Asked Questions. Internet website: http://.laworks.net//_MainMenu.asp.
- Maritime Administration (MARAD). 2008. Glossary of Shipping Terms. Washington, D.C.: U.S. Department of Transportation. Internet website: http://.marad.dot.gov//_final.pdf.
- McDaniel, J. and V. Casanova. 2005. Forest Management and the H2B Guest Workers Program in the Southeastern United States: An Assessment of Contractors and their Crews. *Journal of Forestry* April-May:114-119.

- Merchant Marine Academy. n.d. History of the United States Merchant Marine Academy. Internet website: <http://usmma.edu//.htm>. Accessed August 18, 2011.
- Miller, T.R., D.C. Lestina, and G.S. Smith. 2001. Injury Risk Among Medically Identified Alcohol and Drug Users. *Alcohol Clinical and Experimental Research* 25(1): 54-59.
- Mississippi Department of Correction. n.d. Restitution Centers. Internet website: <http://mdoc.state.ms.us/centers%.htm>. Accessed August 18, 2011.
- Moberg, Mark and J. Stephen Thomas. 1993. Class Segmentation and Divided Labor: Asian Workers in the Gulf of Mexico Seafood Industry. In: Franklin Ng, ed. *Asian American Issues Relating to Labor, Economics, and Socioeconomic Status*. New York and London: Garland Publishing, Inc.
- Noel Dunivant and Associates. 1985. *Drug Testing in Major U.S. Corporations: A Survey of the Fortune 500*. Raleigh, North Carolina. Cited in Lange et al. 1994.
- Normand, J. S. Saluards, J. Mahoney. 1990. An Evaluation of Pre-Employment Drug Testing. *Journal of Applied Psychology*. 75:629-639.
- Office of Technology Assessment (OTA). 1983. *An Assessment of Maritime Trade and Technology* Washington, DC: U.S. Congress Office of Technology Assessment OTA-O-220.
- Oubre, Shawn. 2006. Memo to City Council. Subject: Signal International. Orange, TX. September 1.
- Ozminkowski, Ronald J., Tami L. Mark, Ron Z. Goetzel, David Blank, J. Michael Walsh, and Leo Cangianelli. 2003. Relationships Between Urinalysis Testing for Substance Use, Medical Expenditures, and the Occurrence of Injuries at a Large Manufacturing Firm. *The American Journal of Drug and Alcohol Abuse* 29(1):151-167.
- PP001. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Preetam Prakash. Former shipbuilder. Moss Point, MS. June 17.
- PP009. 2008. Personal communication. History of the development of the shipbuilding industry in Jackson County, MS and personal experiences working in the shipbuilding and fabrication industry. Discussion with Preetam Prakash. Retired shipyard worker. Pascagoula, MS. June 23.
- PP010. 2008. Personal communication. History of the development of the shipbuilding industry in Jackson County, MS and personal experiences working in the shipbuilding and fabrication industry. Discussion with Preetam Prakash. Retired shipyard worker. Pascagoula, MS. June 23.
- PP011. 2008. Personal communication. History of the development of the shipbuilding industry in Jackson County, MS and personal experiences working in the shipbuilding and fabrication industry. Discussion with Preetam Prakash. Former shipbuilder. Pascagoula, MS. June 23.

- PP012. 2008. Personal communication. Experiences in labor management, training, and working in the shipbuilding and fabrication industry. Discussion with Preetam Prakash. Retired human resources shipyard worker. Jackson County, MS. June 26.
- PP020. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Preetam Prakash. Service Company. Mobile, AL. June 1.
- PP029. 2008. Personal communication. Experiences in human resources and labor management in the shipbuilding and fabrication industry. Discussion with Preetam Prakash. Human Resources. Moss Point, MS. July 8.
- RC012. 2008. Personal communication. History of Baker Marine. Discussion with Rebecca Crosthwait. Shipyard official. Ingleside, TX. March 19.
- RC019. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Rebecca Crosthwait. Labor contractor. Ingleside, TX. April 11
- RC057. 2008. Personal communication. Experiences in the shipbuilding and fabrication industry. Discussion with Rebecca Crosthwait. Human resources director. Ingleside, TX. June 10.
- RC069. 2008. Personal communication. Industrial needs and education. Discussion with Rebecca Crosthwait. Ship inspector. Ingleside, TX. May 8.
- RC072. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Rebecca Crosthwait. Human resources director. Portland, TX. May 13.
- Reich, M. 1981. *Racial Inequality: A Political Economic Analysis*. In: Reich, M., R. Edwards, and D. Gordon, eds. *The Segmentation of Labor in American Capitalism*. Cambridge: Princeton.
- Rubin, Leste. 1970. *The Negro in the Shipbuilding Industry*. Pennsylvania: University of Pennsylvania Press.
- SA018. 2008. Personal communication. Chinese H-2B visa workers. Discussion with Diane Austin. Computer specialist, Research facility. South Mobile, AL. October 31
- SB005. 2007. Personal communication. Workforce Development. Discussion with Diane Austin. Educator, Community College. Gautier, MS. March 7
- SC033. 2008. Personal communication. Louisiana work release program. Discussion with Diane Austin. Prison official, Louisiana Department of Corrections. St Mary Parish, LA. January 28
- SC039, 2008. Personal communication. Workforce shortages and strategies. Discussion with Diane Austin. Company official, Shipyard. Morgan City, LA. January 30

- SD006. 2007. Personal communication. Workforce shortages and strategies. Discussion with Diane Austin and Heather Gallivan. Company official, Private industry association. Nederland, TX. June 6
- SD007. 2007. Personal communication. Workforce development. Discussion with Diane Austin and Heather Gallivan. Educator, Private industry association, Nederland, TX. June 6
- SD008. 2007. Personal communication. Effects of the shipbuilding industry. Discussion with Diane Austin. Board member, Chamber of Commerce. Port Arthur, TX. June 6
- SD009. 2007. Personal communication. Effects of the shipbuilding industry. Discussion with Diane Austin. City official. Golden Triangle, TX. June 6
- SD014. 2007. Personal communication. Workforce and community issues. Discussion with Diane Austin. Pastor, Outreach ministries. Port Arthur, TX. November 8
- SD015. 2007. Personal communication. Finding and recruiting workers. Discussion with Diane Austin. Labor Contactor. Orange, TX. November 12
- Shipp, Eva M., Susan R. Tortolero, Sharon P. Cooper, Elizabeth G. Baumler, and Nancy F. Weller. 2005. Substance use and occupational injuries among high school students in South Texas. *American Journal of Drug and Alcohol Abuse* 31(2): 253-265.
- Shirley, Steve. 2010. Personal communication. Morgan City history and development. Discussion with Diane Austin. Newspaper Editor, *The Daily Review*. Morgan City, LA. October 10
- Soni, Saket, and Daniel Castellanos. 2010. Letter to Department of Labor Administrator Nancy Leppink. Re: Protecting Guestworkers Facing Loss of Income in Relation to the Deepwater Horizon Incident. Alliance of Guestworkers for Dignity. New Orleans Workers' Center for Racial Justice. July 9.
- SR004. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Sarah Raskin. Human resources. Lockport, LA. June 24.
- SR006. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Sarah Raskin. Receptionist. Grand Bois, LA. June 16.
- SR007. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Sarah Raskin. Owner. Grand Bois, LA. June 16.
- SR008. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Sarah Raskin. Trainee, Shipyard. Galliano, LA. June 25.
- SR024 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Sarah Raskin. Former Ship worker. Golden Meadow, LA. July 9.

- SR025. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Sarah Raskin. Shipyard owner. Houma, LA. July 10.
- SR026. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Sarah Raskin. Catholic Social Services. Houma, LA. July 10.
- SR032. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Sarah Raskin. Labor contractor. Houma, LA. July 31.
- St. Pé, Jerry. 2008. *On Eagles' Wings*. Pascagoula, MS: St. Pé & Associates.
- Tampa Ship, LLC. 2009. Home page. Internet website: <http://tampabayship.com/>.
- TB003. 2007. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Terez Banks. Young welder who began working in a shipyard through a work release program. Morgan City, LA. June 18.
- Texas Correctional Industries. n.d. Prison Industry Enhancement Certification Program. Internet website: <http://tci.tdcj.state.tx.us///.aspx>. Accessed August 18, 2011.
- Transportation Security Administration (TSA). n.d. Transportation Worker Identification Credential (TWIC™) Program Information. Internet website: http://tsa.gov/we_do///info.shtm. Accessed August 18, 2011.
- U.S. Census Bureau. 2007. Industry Statistics Sampler. NAICS 336611: Ship building and repairing. Internet website: <http://census.gov///.htm>.
- U.S. Citizenship and Immigration Services (USCIS). 2009. Adjudicator's Field Manual—Redacted Public Version. Chapter 31 Petitions for Temporary Workers (H Classifications). 31.5 Temporary Service or Labor Workers (H-2B). Internet website: <http://uscis.gov////////.html>.
- U.S. Citizenship and Immigration Services (USCIS). 2011. Temporary (Nonimmigrant) Workers. Internet website: http://uscis.gov/ext-templating//.jsp?_f8b69583210VgnVCM100000082ca60aRCRD&vgnnextchannel=_f8b69583210VgnVCM100000082ca60aRCRD.
- U.S. Department of Labor. n.d. Drug-Free Workplace Act of 1988. Internet website: <http://dol.gov///.htm>. Accessed August 18, 2011.
- U.S. Department of Labor. 2009. Foreign Labor Certification Data Center Online Wage Library. Internet website: <http://flcdatacenter.com/B.aspx>.
- U.S. Department of Labor. 2010. National Compensation Survey—Wages. Bureau of Labor Statistics. Internet website: <http://bls.gov///.htm#Division>.
- U.S. Department of Labor. 2011a. Union Affiliation of Employed Wage and Salary Workers by State. Bureau of Labor Statistics. Internet website: <http://bls.gov/.release/.t05.htm>.

- U.S. Department of Labor. 2011b. Union Members Summary. Economic News Release. Internet website: <http://bls.gov/release/nr0.htm>.
- Vambery, Robert G. 1968. The Effects of Subsidies in the United States Shipbuilding Industry Journal of Transport Economics and Policy. 2(1):79-93.
- Vambery, Robert G. 1970. Proposals for a Long-Range Maritime Transport Programme for the United States. Journal of Transport Economics and Policy 4(2):121-143.
- VP013. 2007. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Owner. Grand Bay, AL. July 8.
- VP065. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Production supervisor, Fabrication yard. Pascagoula, MS. May 9.
- VP080. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Company president. Bayou La Batre, LA. May 29.
- VP081. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Estimating. Pascagoula, MS. May 30.
- VP083. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Fabrication yard administrator. Pascagoula, MS. May 30.
- VP094. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Owner. Pascagoula, MS. June 12.
- VP095. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Secretary. Pascagoula, MS. June 12.
- VP096. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Recruiters. Pascagoula, MS. June 12.
- VP116. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Marketing. Gautier, MS. June 2.
- Wallace, Barbara, James Kirkley, Tom McGuire, Diane Austin, and David Goldfield. 2001. Assessment of the historical, social, and economic impacts of OCS development on Gulf Coast communities; Volume II : Narrative Report. Prepared by TechLaw, Inc. OCS Study MMS 2001-027. U.S. Dept. of the Interior, Minerals Mgmt. Service, Gulf of Mexico OCS Region, New Orleans, LA.
- Walsh, J. M., and Hawks, R. L. 1988. Employee Drug Screening and Detection of Drug Use by Urinalysis [DHHS Publication (ADM) 88-1442]. Rockville, Maryland: National Institute on Drug Abuse.

Whitehurst, Clinton H. 1986. *The U.S. Shipbuilding Industry: Past, Present, and Future*. Annapolis, MD: Naval Institute Press.

Wilkinson, Kaija. 2008. Wanted: skilled workers. *Mobile Press-Register*. May 11.

Young, Abe Louise. 2010. BP Hires Prison Labor to Clean Up Spill While Coastal Residents Struggle. *The Nation*. July 21.

3. THE BUSINESS OF FABRICATION AND SHIPBUILDING

3.1. Introduction

While the large fabrication, shipbuilding, and repair facilities dominate the industrial zones of many of our Gulf Coast study areas, a vast array of small businesses dot the waterfront landscape of the region. The major yards are often publicly-owned corporations and typically build for a variety of clients, government and corporate. Smaller yards rely on the entrepreneurial skills of local owners and operators, drawing clients and business through face-to-face contacts, building reputations through word-of-mouth, often hiring staff through networks of kin, and adjusting as best as possible to the vagaries of the industry. This chapter aims to describe and analyze the work experiences of the owners of such businesses. Their experiences and perceptions reveal important information about the historical and contemporary state of shipbuilding and fabrication.

Three groups of business owners, distinguished by the times at which they entered the industry as owners, will be considered here. This classification will allow for exploration of historical changes in conditions confronting owners since the mid-1960s. The chapter begins with a consideration of those business owners who started operations prior to the mid-1980s downturn in oil prices. The downturn was perceived by many business owners as well as other members of the industry to be a highly significant event for the industry and one that altered business and worker strategies and behavior in various ways. In many cases, business owners who started their business in the pre-downturn era operated in a different industrial climate than those getting their start during or after this period. Following a consideration of the impacts of the 1980s downturn on already established owners there is a discussion of owners who started businesses in shipbuilding and fabrication following the 1980s downturn, often during the period of industry reorganization in the mid-1990s. The final sub-section turns to business owners' perceptions of historical and contemporary challenges and successes in the industry, as well as their general perspectives on shipbuilding and fabrication. This last section includes the views of all three groups discussed in the section.

3.2. LONG TERM PARTICIPANTS

The period of time from the 1960s to the early 1980s was a time of readily available work and business opportunities in shipbuilding and fabrication in many Gulf Coast communities. Not surprisingly, a number of businesses opened in the study communities during this time. In most cases, the people discussed here entered the industry by the mid- to late 1970s and have remained attached to it despite downturns, layoffs, and periods of change. Their reasons for doing so are numerous and varied and are explored towards the end of this section. However, not all were still business owners at the time of their participation in this study. Some sold their businesses, for reasons ranging from economic downturns to dissatisfaction with the quality of the current workforce. The owners discussed in this chapter come from the study communities across the Gulf. All are white males, currently in their 50s, 60s, and 70s.

In most Gulf Coast communities the shipbuilding and fabrication industry's demand for labor was high in the mid and late 1970s, driven by the expansion of offshore oil and gas exploration and drilling. Several owners commented on the ease with which one could obtain training and jobs in the industry during this time period. High demand on the part of important client industries, most prominently the offshore oil industry and the shrimping and fishing industries,

for new build and converted vessels, as well as for fabricated components, enabled relatively easy business startup and client acquisition for those possessing the necessary technical skills, experience, and social connections. For a few Gulf Coast yards, such as Ingalls in Pascagoula, MS, the 1970s were also a time of lucrative U.S. Navy contracts for new vessels. However, for the most part, the 1970s witnessed a decline in the military contracts for shipyards in the Gulf. Military work was not mentioned by owners in this section as a catalyst for business startup or an important source of income.

Money, family, and community traditions were three leading factors initially attracting many of today's yard and shop owners to the industry in the 1960s, 1970s, and early 1980s. Those who started out as owners during this period often had a background in fishing and shrimping. In some cases, owners came from a family background of shrimping and fishing but did not work professionally in the industry themselves (BM010A 2008). In the majority of instances, those who mentioned a family background in shrimping and fishing had themselves worked professionally in the industry (VP021 2007; VP068 2008; VP073 2008; VP074 2008; VP104 2008; BM065 2008; BM066 2008). Several members of this latter group had previous experience with owning and operating their own businesses either as seafood dealers (VP104 2008) or shrimping and fishing boat operators (VP068 2008; VP073 2008; VP074 2008; VP104 2008), something which would help them get established as owners in shipbuilding and fabrication. Those who had not owned businesses had worked for and helped to manage family businesses (VP021 2007; BM065 2008; BM066 2008). Through their involvement, and in many cases their family's involvement, in shrimping and fishing these men were already situated in social and business networks that would be of use in shipbuilding and fabrication. Through their entrance into the industry as owners, these men were able to maintain a level of autonomy, which for many had been a major attraction of shrimping and fishing (Margavio and Forsyth 1996). In several Gulf Coast communities, such as Bayou La Batre and Morgan City, the initial development of the shipbuilding and fabrication industry was partially the result of people involved with the shrimping and fishing industry deciding to make the transition to shipbuilding and fabrication. The fact that majority of the owners in this group entered shipbuilding and fabrication from fishing and shrimping indicates the close relationship that existed between the two industries prior to the late 1970s and early 1980s, in terms of basic skill sets, as well as social networks.

Other owners started their careers as skilled labor in the local shipyards or shops (BM032 2008; VP103 2008; VP023 2007; VP024 2007) or construction (BM040 2008; BM055 2008). Individuals in the former group noted that they were motivated to enter shipbuilding and fabrication because at the time the industry offered some of the highest paying jobs in the local area. Besides work in shipbuilding and fabrication, there was often little else desirable in terms of well-paying jobs for those looking to enter the local workforce. Similarly, the decision of those outside of the industry, either in fishing and shrimping or in construction, was generally motivated by the money available in shipbuilding and fabrication at the time. The fact that most local high-paying jobs were to be found in the shipbuilding and fabrication industry or, in some communities, refinery work, was well known to most residents of Gulf Coast communities in the 1960s and 70s, and efforts to draw more workers to the communities that were host to the yards and facilities included widespread advertising and job opportunities often disseminated through specialized networks such as training programs and trade schools. One yard owner from Bayou La Batre, Alabama outlined the options that had been available to him as a young man:

The options available to me as a young boy were picking watermelons, the shrimp factory, mowing lawns, the local grocery store bag boy. I did all of these previous to working at the shipyard. I could get more money at the yard (VP023 2007).

Additionally, at least some owners ascribed their initial knowledge of the industry to family tradition, often naming a family member who had been in shipbuilding or who had worked as a welder or held some other occupation that had served to familiarize them with some aspects of what they would face in the industry.

Besides the lure of high wages and the desire to adhere to established traditions, future owners were also attracted to the industry due to what they perceived as the opportunities that the industry offered for creativity and innovation. Several owners described their early love for vessel construction and their interest and fascination with experimentation and improvements in this process. Often, such individuals described their inherent aptitude for working in the industry and sometimes conceived of themselves as having a “calling” to build vessels. This will be discussed at greater length below.

Formal education among owners was generally low, with most opting to go into the workforce either in high school, or immediately afterwards. Only one owner included in this discussion started out his career in shipbuilding and fabrication with a higher education degree (PP072 2008). VP021 was another owner with an engineering degree. However, in this case an engineering degree was something VP021 obtained later on in his career, seeing it as a benefit to the yard. Two other owners reported anywhere from a semester to a few years of college experience before quitting to go to work in the industry (VP023 2007; VP024 2007).

Movement from job to job was moderate among those future owners who worked in the industry as craftsmen, although some did work at several yards prior to starting their own businesses. Both owners who moved across yards as well as those who remained in one location acquired skills and knowledge, including training in the crafts as well as other skills such as blueprint reading, that would be highly useful in running their own businesses. In some cases, owners ended up centering their businesses on the same production processes or components that they had gained familiarity with during their time working for others in the industry. The following section examines the specific conditions under which owners started businesses from 1960 to the early 1980s and the reasons they provided to account for their decisions.

3.2.1. Business Startup

While much of the nation was in a recession in the 1970s, many areas of the Gulf Coast associated with shipbuilding and fabrication experienced a considerable boom, and as might be expected, numerous businesses associated with this industry opened along the Gulf Coast during this time and into the early 1980s. Some businesses opened even earlier on in the 1960s, mostly in areas such as south Louisiana which had begun to experience the economic impacts of the offshore oil industry earlier on. What types of reasons did individuals have for going into business for themselves during a time when work, while not necessarily stable, was by most accounts plentiful in the shipbuilding and fabrication industry, as well as in the shrimping and fishing industries along the Gulf? What types of work did their businesses start out doing and what types of challenges did they face? How did business owners respond to these challenges, both initially and during the 1980s downturn? These issues will be addressed, starting with a discussion of reasons owners provided for getting started in the industry around this time.

Owners cited a number of reasons for entering the industry. Some went into significant detail regarding particular socioeconomic factors that influenced their decisions. Such factors most commonly included involvement in certain social networks and local economic developments. Others emphasized individual attributes such as intrinsic talent or inclination towards the industry as well as previous job experiences as among the main reasons for entry. Sometimes the owners attributed their entry to both factors. Owners commenced operations doing work ranging from fabricating shrimp trawl doors to building supply boats for the offshore oil industry. Some were intimately involved with the oil industry from the onset (PP072 2008; VP104 2008; BM032 2008), while others became increasingly involved with this industry as time went on. For the majority, the surge of business generated by the expansion of offshore oil was a primary reason for entering the industry. The reasons owners gave for getting into a certain type or types of work ranged from familiarity with particular processes to fortuitous opportunities that allowed involvement in a certain aspect of the industry, such as building specialized seismic boats or constructing drydocks. Occasionally, the decision to go into a particular type of work was also influenced by the skill sets of family members and friends. This section only deals with owners who started their own businesses. Family businesses, in terms of multi-generational operations which existed prior to the entry of the owners discussed, are covered in a later section in this chapter.

Many business owners referred to multiple socioeconomic factors in accounting for business startup. Favorable economic developments and family and social networks were widely mentioned. VP074, a fabrication shop owner from Bayou La Batre, described the positive, at least from his point of view, economic event that had initially prompted him to go into business for himself in 1974:

I had a couple of friends who were getting out of it, I decided to give it a try... One of the men I sold shrimp to was...one of the men who sold out of the business. I bought all his equipment... I paid one third retail value (VP074 2008).

Despite VP074's having no previous experience in the industry, his social and business networks allowed him to get started with much lower capital investment than would have otherwise been possible. VP074 also referred to the fact that he had readily available, competent help in the form of his son who had experience in the industry and his friend who had worked for local shipbuilding and fabrication companies as another important reason that he was able to get started when he did. Other owners had initially gotten involved in shipbuilding and fabrication part-time, but as the industry picked up in the late 1960s and throughout the 1970s, they found themselves going to work full time in the industry in response to economic demand:

I started out part time, when I was working in the construction industry. I did some of this and that...and things were getting bigger and bigger—so I quit the job I had (BM040 2008).

In BM040's case, his increasing involvement was in direct response to the growing economic impact of the oil industry on shipbuilding and fabrication. While going unmentioned by BM040, family tradition and connections were an important factor for the majority of owners getting their start during this time. In some cases, such family experience was directly in shipbuilding and fabrication, and startup was a natural transition from earlier experiences in the industry. When

questioned about how he became involved in the industry, this yard owner in Bayou La Batre replied:

I've always been in the business. I've always been associated with it. I like it, I like building a good product. I worked with my father and my grandfather (VP104 2008).

The experience of growing up working in the family business was among the factors that led VP104 to open his own yard in the 1970s. VP104 grew up with knowledge of both shipbuilding and fabrication as well as shrimping and fishing as his family built vessels for the shrimping and fishing industry and his first experiences of professional employment came in this industry as well. Some other new owners were assisted by family members in the opening of new yards (BM010B 2008; BM065 2008; BM066 2008). This fabrication shop owner described how he and his brother had gone into business for themselves in the late 1970s:

My dad was involved in offshore, after working in the shrimping and fishing industry...during the 70s, we started to convert boats to standby boats...because of the boom in the offshore work, we had the opportunity to convert boats, and my brother and I shared a boat so we converted it over... (BM065 2008)

Converting shrimping and fishing vessels for use in the offshore oil industry appealed to many residents of Gulf Coast communities in the 1970s and early 1980s as an easy source of income and also served as a way for those in shrimping and fishing to transition into shipbuilding and fabrication. Others had picked up skills relevant to shipbuilding and fabrication when younger and had experience in other areas of skilled labor. BM055, for example, saw the opportunity to make a favorable move into the shipbuilding and fabrication industry from another business:

My dad got me into boat building when I was a kid. We had a sheet metal business. In my mid-20s I didn't like this job so I got into the boat building business (BM055 2008).

For several owners, previous jobs in shipbuilding and fabrication, construction, or other industrial fields imbued them with the fundamental technical skills and, in some cases, the management experience necessary for business startup.

In addition to socioeconomic factors, while discussing business startup, owners made considerable reference to individual attributes. These personal characteristics included a long-standing interest in shipbuilding and fabrication, innate skills for working in the industry, previous job experiences, and a solid work ethic. These owners often spoke of having had a general feeling that owning a yard or shop was something that they were in some way meant to do. The following quote is from one of a pair of brothers who opened up a new shipyard in Bayou La Batre, Alabama in the late 1970s:

We started in 1978 with very few personnel, about four. It was the two brothers and our dad that started it. Dad used to have seafood shop in town, but we wanted a shipyard. We didn't know anything about boats (VP021 2007)

Despite the fact that VP021 and his partners lacked knowledge regarding vessel construction, they decided to get into the shipbuilding and fabrication industry in the late 70s. Another yard owner from Bayou La Batre was a bit more expansive on his rationale for opening his yard in the late 1970s, phrasing his discussion extensively in terms of his inherent or individual characteristics:

(S)ince first grade, believe it or not, I've been obsessed with boats. I drew pictures, every picture I've ever drawn was of a boat...It was part of my dream, how I was created to be... I'm just a visionary person, I can see the vessel as soon as I start talking about it... I could either work for someone else or work for myself, I wanted to work for myself. I felt more—people use the term thinking outside the box, for me there is no box. It says in the Bible that all things are possible, nothing is impossible (VP023 2007).

VP023 evinced a longstanding passion for shipbuilding and fabrication as well as a conception of entrance into the industry as a means of fulfilling an inherent creativity. Looking retrospectively, owners who emphasized the importance of individual attributes in business startup sometimes viewed this event at the natural culmination of a long-term goal. As one yard owner succinctly put it, “I was planning on opening a yard from day one” (BM032 2008). As we shall see, later on in this section and in section 3.3, this stance is mirrored by some of those who opened their businesses in the late 1980s and beyond.

3.2.2. Types of Work

The majority of owners who started businesses in the 1970s focused on new vessel construction during their years of operation before the 1980s downturn in oil prices. During this time, demand for new build vessels, both for the offshore oil industry, as well as for the fishing and shrimping industries, was up, and owners were largely able to dedicate themselves to this type of work. From the perspective of the present day, several owners expressed a longing for work in new build, which they granted a higher status than repair work that was perceived by some as mainly a means to get by during slow industrial cycles. New build was described as offering the satisfaction of seeing something through from start to finish, something that repair work and other types of work were unable to provide.

For several owners who started out in the shrimping and fishing industry, the move into new build proved to be a relatively quick transition from the repair work they had done when still in shrimping and fishing. Some of these owners also had prior experience building vessels for personal use. For example, BM055, a yard owner in Iberia Parish, Louisiana described his entrance into the industry via the building of new fishing vessels:

My dad built small boats...we started out doing work on small fishing boats. We started with 14-foot fishing boats, and then worked bigger. Sometimes you have to do whatever it takes to get first order (BM055 2008).

Similarly, BM065 and BM066, co-owners of a fabrication yard in St Mary Parish, described their entrance into ownership in the industry and their focus on new build in the late 1970s as a gradual transition from shrimping and fishing and the vessel conversions that they started out

doing. In this case, BM065 and BM066 were assisted by the fact that BM066 had prior experience working in shipbuilding and fabrication in the area, and had picked up skills which would be of use in the transition to new build. However, during the 1970s, the majority of those who went into shipbuilding and fabrication from a shrimping and fishing background did not possess prior experience there. VP104 was an owner who transitioned directly from working as a self-employed shrimper to building shrimping and fishing vessels. Noting the opportunities afforded by the expansion of offshore oil during this time, he reported that he soon came to specialize in the building of seismographic boats:

There was seismograph work in Mobile Bay with old boats. They couldn't find anyone to do the repairs, they came to me and wanted me to fix them... They were having problems with the equipment. I said I could build them a boat to do what they wanted. Then, in 1981, I finished the first boat I designed and built for seismograph work. It increased production dramatically (VP104 2008).

One owner discussed in this section, VP074, was engaged mainly in new component fabrication in the 1970s to the early 1980s after he opened his business. Also, coming from the shrimping industry, this owner started out building specialized equipment for the shrimping industry exclusively but soon expanded into servicing the oil industry as well. Aluminum and wooden doors constituted the majority of this owner's business prior to the downturn. No other owners who began operations before the downturn reported new component fabrication constituting a significant portion of their business in the 1960s to early 1980s period.

Three owners got their start in repair and conversion work in the mid to late 1970s (BM040 2008; BM065 2008; BM066 2008). BM040 recalls repairing old cranes and other equipment for the offshore oil industry at the onset of his career as an owner. BM065 and BM066 started out their business working on converting shrimping and fishing vessels for use in the offshore oil industry. Both of these businesses transitioned to new build as soon as they were able. For the most part, repair work occupied a secondary place to new build when the latter was available. Several owners voiced their perceptions of the dirty nature of repair work, as well as the added environmental pollution and danger to workers involved. Other types of initial and long-term work done by this group of owners included loading boats for the offshore oil industry and drydock fabrication. BM032's decision to focus on the latter in his new shipyard was directly contingent on the work that he had previously done at a large local shipyard.

3.2.3. Early Challenges and Responses

Businesses that opened during the 1960s to the early 1980s period reported facing various challenges during their early years of operation. These included difficulties finding, training, and maintaining a steady workforce, and other workforce-related issues such as drug use and attendance problems (see also Chapter 4). Also mentioned were difficulties acquiring clients, trouble locating and acquiring suitable land for operations and issues concerning yard or shop location. Most owners who mentioned challenges present prior to the mid-1980s also added that these problems had generally gotten worse over time, in particular the problem of skilled labor acquisition.

The acquisition and maintenance of a skilled workforce was cited by a few owners as having been a significant issue for business even in the 1960s to early 1980s. While many owners perceived these problems as having become more severe in recent years, a few referred to them

as having been one of the major issues confronting businesses involved with shipbuilding and fabrication since the 1960s and 70s. This is important given the tendency of many in the industry, both long-term and more recent entrants, to blame the lackluster work ethic of the younger generation for the current state of the workforce. Partially in opposition to these accounts, VP021 recalled, while in the middle of discussing present concerns with the labor force, having had to go to some lengths to find workers when he first started his business. Similarly, VP074 stated that the greatest challenge that his business had faced since its origin was finding good people to work. BM040 drew a clear parallel between the historic and contemporary nature of the workforce when he said in reference to labor shortage issues currently faced by larger yards in the area:

They have the same problem that we've always had—and that's finding someone to work... (VP074 2008).

BM032, a yard owner in Orange, Texas, commented on the historic position of shipbuilding in the community, making it clear that in communities where other employment opportunities existed, local labor has not have always been eager to work in the shipbuilding and fabrication industry:

In those days, everybody worked at one of the refineries, because they felt like you had security, retirement, benefits. Once you had a job there, you didn't have to worry about that any more... The communities have always looked at the shipyards as a second class place to work—even when I was in high school (BM032 2008).

BM032 stated that, despite this, he himself did not have trouble finding workers during this time.

Drug use is another issue that many related to the younger generation of workers. However, BM032 and VP104 were two owners who indicated that drug use had been prevalent among labor in the industry since they got their start in the shipyards, during the 1950s and 1970s respectively. Problems with workforce acquisition, maintenance, and discipline are not new developments. These problems are held by many in the industry to have gotten worse in recent years but have existed in one form or the other since the 1950s. Overall, a few owners acknowledged that some of the same problems that exist among today's labor force also existed in the 1970s and early 1980s. However, these people were also firm on the notion that these problems, while existent historically, had gotten considerably worse in recent years.

While work was relatively easy to come by in the pre-downturn period, client acquisition was not entirely effortless for everyone starting out during this time. Two owners reported having to make deliberate effort to acquire clientele, both initially and as time went on. VP021, a yard owner in Bayou La Batre, Alabama, provided one such example. VP021, his brother, and father started out as owners knowing, in his own words, “nothing about boats”. In order to make initial sales on boats, it was necessary for them to hire brokers. However, soon after this initial period of working through middlemen, the business built enough of a reputation for itself that it was able to sell directly to customers. As VP021 put it, referring to the relationship between the company and brokers, “we tried to not need them and did it pretty quick.”

VP074, a fabrication shop owner in Bayou La Batre, also employed specific strategies to acquire clients when he first got his start. He already had numerous contacts through friends in the shrimping and fishing industry. However, he attempted to accumulate more customers through various means:

When things got busy and people needed [equipment] for the season, others put them on waiting lists; we could get it to them faster. We got business that way. We'd load them on a pickup truck and drive them to Mississippi, Louisiana, Florida to show people, create interest. We was new boys on the block. One guy bought a whole bunch of [parts] and stocked them up down there, they'd sell them....We gradually got bigger, we had orders to Africa; others couldn't fill them, but we did. We put our name and number on the [equipment], it's advertising (VP074 2008).

VP074's efforts seemingly paid off soon afterwards; as he described, his client list stretched out of the local region and to the international level. Furthermore, VP073, VP074's father who was in business with him, discussed how yards that were "leery" at first of buying products from a newcomer were won over by the fact that they would offer to service and repair the equipment that they sold to local shipyards.

The majority of owners in the pre-downturn period reported little difficulty in acquiring clients; they often had easy access to them due to pre-existing social networks. The dual ties of many owners to shrimping and fishing as well as offshore oil ensured brisk business in the 1970s, when demand for new vessels was high in both industries. VP024 and VP073 were themselves able to obtain a steady clientele fairly quickly, also benefiting from the economic boom in crucial local industries during this time. Compared to owners starting out in the years following the downturn, business acquisition was relatively easy for this earlier group of owners.

3.2.4. Impacts of the Mid-1980s Downturn

Most of the business owners discussed above, all of whom were active in the industry during the downturn, agreed that this period presented significant challenges to businesses associated with shipbuilding and fabrication. For some, the downturn marked the onset of pronounced changes in the availability and quality of the labor force and in the availability of contracts. These consequently produced the need to adopt various new strategies to keep a business going. Some were either unable or unwilling to battle to stay afloat during this time and either temporarily or permanently closed their doors. The extent and length of impacts varied across owners and by community. One fabrication shop owner on the Mississippi Gulf Coast discussed the impact of the downturn on his business:

We expanded rapidly during the oil boom of the 1970s and 80s. Then in 1983 it was as if someone had flipped a switch and all business just went dead. It was flat for 10 years. We just muddled along... (PP072 2008)

From owners who had been running their business since the 1960s to those who had opened their doors just a few years prior to the downturn, all were taken by the surprise. None who had been in the industry throughout the 1960s and 1970s had been faced with such a severe and prolonged downturn. BM032 is an owner in Orange, Texas who had more than 20 years of

experience in the industry by the time the downturn came. He discussed at length his perceptions of the relationship between oil prices and the industry and the impact of the downturn on the industry and his business in the 80s:

It's all connected—the shipyard and oil business is all intermingled and connected... the biggest part of the shipyard is to service the equipment of the oil industry ... During the oil boom, some of those little fishing villages probably realized they could make more money moving crews and supplies... When the drilling rigs shut down, of course the shipyards shut down. All that was left was the dry cargo, agricultural cargo. But that's not the major thing—the major thing is supporting the oil business. As long as the price of oil stays up, the shipyard and all the support businesses will stay good.... That's the only time I ever saw the industry get that bad. There have been bad times...but this was the only time when we didn't have anything to build (BM032 2008).

While BM032 acknowledged that the industry was cyclical and periodically went through economic cycles, here he notes that the 1980s downturn claimed a singular place among these industrial cycles. Though shipbuilding and fabrication along the Gulf Coast has varied in the extent of its involvement with the petroleum industry, work generated by this industry rose to a new level of importance in all study communities, and the decline in oil prices had implications for shipbuilding and fabrication in most Gulf Coast communities. Less experienced than BM032, BM065 and BM066 started operations in 1980. Reading the demand for supply boats to service the growing offshore industry, they had some early success with boat conversions and fabrication work in the late 1970s. However, this soon dissipated with the downturn in oil prices:

So we started up [the company] in 1980—and the timing on that wasn't great—in 1982, was the bust—and we had to cut most of our jobs. We went from 135 people to 25 people, and we had to give them odd jobs just to keep them around. But we stayed on, and we'd keep bidding on jobs that came around, and eventually we'd get one...so we were able to stay afloat (BM065 2008).

BM065 describes a situation that was fairly common among those involved in the industry during the 1980s. Most were forced to reduce their workforces, often times drastically, to stay afloat under the new economic circumstances. The downturn led many local businesses that had previously been mostly or even wholly dependent on the oil industry for income to diversify into other areas and to restructure their businesses in other ways, including workforce management. For example, PP072 remembers:

The 1980s is when we got into component fabrication more heavily. We also got into more field machinist work and engineering work. I got back into consulting (PP072 2008).

PP072's business was hit hard by the downturn and diversification was a necessary strategy to pursue during this time. However, the downturn had a more lasting effect on PP072's business in that even when business finally picked back up, he reported establishing clients outside of the local area, having acquired a mistrust of depending solely on local business during the 1980s.

BM032 recalled the need for owners in the 1980s to not only diversify operations, but to also concentrate more heavily on types of work that they found less appealing and to quit doing work that was no longer profitable given the low price of oil:

I had to lay guys off, had to keep a small crew, and had to change the way of doing business...We kept on doing the little repair work for the guys who were still hanging on. But there wasn't much new construction during that time. Anything we did [during the oil downturn] in terms of new build was something we did for ourselves... we got into it when the oil industry was pretty good... when I saw the downfall, we sold the whole business, before things got really bad (BM032 2008).

Other owners described similarly having to revamp yard strategies, sometimes building on speculation and then hoping to sell vessels when prices rose again. VP073 and VP074 were co-owners who mentioned that part of their diversification strategy during the downturn included engaging in fabrication work for larger local shipyards. This type of relationship between smaller yards and shops and larger businesses in the industry was not reported by owners in the pre-downturn era, but has increased in recent years. The downturn in oil prices necessitated the restructuring of some businesses associated with shipbuilding and fabrication on the Gulf and the shutdown of others. Operations that had been viable when oil prices were at a high were no longer profitable, and many businesses had to bid on a wide variety of contracts in the hopes that something would come through.

Many businesses did not make it through the downturn. The amount of repair work was limited and many boat owners were forced to simply scrap vessels rather than have them repaired or modified. VP023 and VP068 had headed prosperous businesses in the late 1970s and early 1980s; however, with the onset of the downturn, both businesses were beset by a number of problems, which resulted in having to shut down at different points during the 1980s. VP068 turned to running shrimping boats and working as a seafood dealer to get through the downturn. VP023 stayed in shipbuilding and fabrication and worked in a series of yards in various capacities, ranging from engineering work to management. VP103 also failed to make it through the 1980s. However, he noted his problems were not due directly to the downturn in oil prices, but rather due to the impacts of Hurricane Frederic in 1979. As this event came right around the beginning of the oil downturn, VP103 was unable to start up another business or find much of anything in the way of work. He was forced to go into business for himself out of necessity, as an independent truck welder, something that is discussed in more detail in the following section.

In the collective memory of the industry, the 1980s downturn is an event of major significance. However, its effects were not uniform. Some owners remembered coming through this time period relatively unscathed, and even recall being able to capitalize on some of the new opportunities that became available at this point. VP104, for example, a yard owner in Bayou La Batre, reported a steady level of work during the 1980s. His main complaint about the industry during the period of time between 1980 and 2000 was not the impacts of the 1980s downturn, but environmental regulations that he viewed as inhibiting or forcing the restructuring of his business. VP104 also made mention of a more general lack of public knowledge concerning the workings of the industry as a grievance during the 1980s and into the current day. BM032 was another owner who, despite experiencing considerable hardship during the 1980s, was still able to find ways to capitalize on the situation:

I was fortunate in being able to take advantage of other people's downfalls. A bank in Pennsylvania repossessed 25 boats. I knew I'd be able to sell them and I was fortunate enough to have the money to buy them. I bought them for \$250,000 each, sold each one for not less than \$300,000 (BM032 2008).

It was not just business owners already in the industry who were able to occasionally profit during the 1980s. In this next section, we will examine instances where people were able to benefit from the state of the industry in the 1980s by successfully opening new yards.

3.3. NEW OWNERS DURING THE MID-1980S DOWNTURN

Perceptions of the downturn varied across the owners discussed in this section. Some remembered the downturn extending into the early 1990s, while others put its end at a much earlier date, some point in the mid-80s. The four owners discussed in this section (VP103 2008; BM012 2008; SR019 2008; BM116 2008) got their start in the industry during a time that they themselves perceived as having been during the downturn. Three of the owners had been involved in the industry since the mid-late 1970s, whereas the fourth got his start in the mid-1980s. All four owned businesses based in study communities in Louisiana, Alabama, and Texas. All four received some or all of their initial training and work experience in shipbuilding and fabrication in large local shipyards. VP103 was the only one of the four who mentioned a family background in commercial fishing, wherein he first got acquainted with vessel operation and construction although never working professionally in this industry. BM012 and BM116 both mentioned a family background in shipbuilding and fabrication. BM012, BM116, and VP103 all received their first taste of full-time working life in the shipbuilding and fabrication industry. SR019 initially took a different route, but soon ended up in shipbuilding and fabrication.

VP103 came from a family with a commercial fishing background; his father had been skilled in various crafts, including shipfitting, carpentry, and electrical work, putting this knowledge to use working in the local yards when work was down in the fishing industry. After high school, VP103 found himself without “any real direction.” However, he had developed a fascination with vessels and the process of shipbuilding early on in his life:

To me it's artwork. I would find myself as a child standing up on the framework of a boat with the whole inside open. I would lay up inside the boat and marvel at how pretty and aligned it was. It was the beginning of something that sowed around when I was 13 or 14 (VP103 2008).

He was not interested in following in his father's footsteps and going into commercial fishing, which he found “boring.” He preferred vessel design. As others who had founded shipyards and shops earlier on, he was taken with the room for creativity and invention in the shipbuilding process. This early interest led to VP103 entering into an apprentice program at a large local yard in Pascagoula, although upon entering he knew very little about what was involved in the various crafts required for vessel fabrication:

I walked in and said, "What do you have?" They had pipe fitters. That had a mystique and sounded good. Shipfitters, that sounded good, I'll take it. There was

a four year apprentice program to hire in. I did it. I threw myself into the education (VP103 2008).

VP103 acquired a basic understanding of the crafts from his father but did not possess any in depth technical knowledge when he entered the industry. He acquired various skills working for the large shipyard that he apprenticed for and, when he was laid off, moved on to another shipyard in the region. After a few years of work at this location, he decided to open a shipyard along with another man that he knew. He was forced to close this yard after Hurricane Frederick in 1979.

BM012 hailed from a family with a history of working for a large local yard. He went to work early at a large local yard in Port Arthur as an engineer designer after his junior year of high school. He continued to work at this yard until it was forced to shut down due to impacts of the downturn.

SR019 had gotten his start in the workforce as a deckhand on tugboats in 1981, while he was still in junior high school. He had originally intended to work his way up to a captain's position, but the fact that he was colorblind disqualified him from acquiring his mate's license.

I still worked on the boats, trained on my days off, and then as soon as I got good enough to work as a tacker full-time I quit the boats. Worked my way up to tacker, then I became a second class welder and then a certified first class welder by the time I was 21 (SR019 2008).

Self-described as quick learner, SR019 was able to pick up enough technical skills to quit working on tugboats and go to work for a large local shipyard. However, soon after he was laid off when work ran out at this yard. At this point, he began working as a truck welder for another person.

BM116 received his initial training as a machinist at a trade school under the GI Bill after he returned from serving in the army in the late 1970s. He thereafter went to work at a large local yard in Morgan City as a loftsman wherein he gained skills and experiences in other crafts and disciplines such as layout design. BM116 stated that he made it a point to gain familiarity with as many different aspects of the business as possible at this point. Talking about the period after this, BM116 noted, "Then you started dealing with customers—and the way to move up in your career is to interact with the customers." (BM116 2008). Thus, BM116's time working for a large shipyard imbued him with not just technical but also communication skills that would prove invaluable after he had gone into business for himself.

3.3.1. Business Startup

As with business owners who got their start in the 1960s to the early 1980s, owners who got their start during the downturn also described this event through reference to both socioeconomic factors as well as their personality, drive, and other individual qualities. SR019 was working running a welding truck for someone else when he decided to quit and go into business for himself. Throughout this early portion of his career spent working for others, his goal was "to have my own truck and be a truck welder." Just a year after he started working for the truck welding business, SR019 quit and started his own truck-welding operation. He held his personal trait of being a "quick learner" to have been crucial to the startup and maintenance of his business.

VP103 went into business for himself as a truck welder at the beginning of the 1980s after the yard he owned in the late 1970s failed in the aftermath of a hurricane. Throughout the 1980s, VP103 continued to work for himself as a truck welder on and off, in addition to working a variety of odd jobs to get by and support his family. He put the skills that he had acquired during the 1970s to use working for various companies as a contractor during the 1980s. He then opened another shipyard in the late 1980s during what was still a slow time for the industry. Referring to this period he said, “I let it lay dormant and then I'd pick it back up and do some [work]”. VP103 did not launch fully into this new shipyard in the 1980s but rather opted to continue doing other work at a variety of locations to see himself through the 1980s. He occasionally did work at this new yard but did not fully commit to it until considerably later on, a strategy different from those of the three other men described here.

BM116 was working for a large local shipyard and had enough reserves in the mid-1980s to go into business for himself by taking advantage of shipbuilding and fabrication equipment being sold at very low prices. BM116 briefly sketched the circumstances under which his shop opened:

This business has gone through more ups and downs than a roller coaster... I started [the company] in 1986, and just for reference, oil was around 9 dollars a barrel in 1986. The percent of drilling rigs drilling for oil was about 25. That's when I went in business (BM116 2008).

Despite the less than favorable conditions during the downturn, BM116 was able to get his business off the ground thanks to some startup capital and the fact that he had friends already involved in the industry from whom he was able to purchase cheap equipment:

There are two directions you can go—you can go broke, or you can go up. I started with 45,000 dollars, that was my life's saving...and we sold some rent houses. I bought stuff for 10 cents on the dollar. All these companies went bankrupt. And a good friend of mine was buying stuff for next to nothing. I bought stuff at bargain basement prices. It wasn't quite the end of the bust, but it was near the end. My friend had a warehouse bulging with gear, and he sold them to me for what I never thought I'd get them for (BM116 2008).

BM116 entered the industry with not only sufficient equipment, but also adequate training. His decision to get into the industry during the downturn was not described simply as a result of having a personal goal but rather as mixture of this and the economic opportunity presented by other businesses that had failed due to the downturn. BM116 built his business around the fabrication of components for the offshore oil industry, and his company specialized in ladders and conductor guides. Because he went into business relatively close to the end of the downturn, BM116's acquisition of cheap secondhand equipment from owners who had previously fabricated for the offshore oil industry soon paid off with the relative upturn in business for shipbuilding and fabrication.

BM012 reopened a shipyard that failed in the 1980s. Like the others discussed here, he got his start in the industry and acquired basic skills working for a large local shipyard. When BM012 arrived at this yard, business was booming, and the yard and its operations underwent considerable growth and expansion due to its close relation to the offshore oil and gas industry. However, soon afterward, this yard fell into trouble with the onset of the downturn in oil prices.

BM012 reported that yard shutdown shortly after accepting a contract for fishing vessels that was in fact supposed to help it recover from the loss of business caused by the oil downturn. The year after, BM012 was able to reopen the yard and soon begin to make a profit. To do so, he reconfigured the operations of the yard he reopened to fit the new economic climate. Instead of specializing in new build, as the old yard had, BM012 centered the new business on barge repair, utilizing a novel system of scaffolding in this process to gain an edge over the competition. In this way, he was able to successfully establish a niche during a difficult time for the industry. In the years after the downturn, owners would shape their businesses around repair work; even more long-term participants who had been in the industry since before the downturn would also move in this direction.

SR019 described his decision to go into business as a truck welder as an effort to achieve the goal that he had set for himself at the time. In working as a truck welder, SR019 was able to put many of the skills that he had quickly acquired during his time in the industry to use. Business startup as a truck welder rather than a yard owner required far less capital. Furthermore, SR019 voiced his dislike for management tasks and his fondness for working with his hands, an attitude that suited him well for life on the road as a truck welder.

In VP103's case, the decision to become a truck welder was largely based on necessity rather than desire to go into this line of work. VP103 had been forced to close his yard in the late 1970s, and due to the downturn, he was unable to find work. Thus, he described working as a truck welder as more of last resort move rather than a planned business decision.

The 1980s were largely reported by business owners in shipbuilding and fabrication to be a tough decade, but there were in fact some who succeeded in starting new businesses during this time. Some who started businesses during the downturn did so out of necessity. In this way, they differed from the earlier group of owners discussed, none of whom reported being forced to go into business for themselves. Also, in contrast to those owners who started businesses in years prior to the downturn, none of the owners discussed here moved into shipbuilding and fabrication from the shrimping and fishing industry. VP103's family had been involved in shrimping and fishing, but all of his own work experience after high school came in the shipyards. Similarly, BM012, BM040, and SR019 all gained the majority of their work experience in the shipbuilding and fabrication industry. With the exception of VP103, none of the owners in this group had prior experience as business owners.

By the 1980s, the strong link between the commercial shrimping and fishing industry and shipbuilding and fabrication was eroding. The absence of demand for new build or converted vessels for the oil industry made it harder for those in shrimping and fishing to easily transition to shipbuilding and fabrication. Furthermore, the profitability of the shrimping and fishing industry had declined by the mid-1980s, prompting fewer local workers to depend on it for their livelihood and generating less capital for ventures such as business startup. As might be expected, the mid-1980s saw a turn away from the oil industry as the foremost or even only source of business for owners in shipbuilding and fabrication. Three out of four owners discussed here did not report receiving any substantial portion of their income from the oil industry. The story of BM116 was unique in this way since he focused on fabricating components for oil rigs from the initial point of business startup. As with the first group of owners, none of the owners here reported military or other government contracts as substantial sources of income around the time they began their business. To a degree, this absence is in contrast with the situation of some larger yards along the Gulf Coast, which were getting more heavily involved with military and government work during the late 1980s. However, BM116

did report that, in more recent years, his business had done work for National Oceanic and Atmospheric Administration.

3.4. NEW OWNERS IN THE POST-DOWNTURN PERIOD

A number of business owners have entered shipbuilding and fabrication since the early 1990s. The unique characteristics of these businesses and experiences of new business owners merit attention and are important to understanding the recent history and contemporary state of the shipbuilding and fabrication industry. All those in this section (PP061 2008; PP066 2008; PP068 2008; PP070 2008; VP102 2008; SR005 2008; SR035 2008; SR017 2008; SR034 2008; SR025 2008) were born and raised in or near the geographic community in which they opened their businesses, although some of them did leave the Gulf Coast region at some point in time to pursue work. The business owners discussed in this section range across all four Gulf Coast states included in the study area. All of these owners were male and most were white males who were in their late 30s or early 40s when they opened their businesses, although there are a few notable exceptions with regard to age. As discussed below, every owner had prior work experience in the field in which he opened his business, and some had cross-training in a number of industries.

In terms of their educational and early work experiences, owners who started out after the 1990s were in many ways similar to those owners who opened businesses at earlier dates. As with previous groups, very few new owners had any college education or possessed college degrees. Owners regularly went into the workforce with a high school diploma or GED certification. Relatively few new owners came from families involved in shrimping and fishing. Furthermore, only one man out of this newer group of owners acquired professional work experience in the shrimping or fishing industries, this coming through part time work during high school (SR005 2008). None of these owners had prior experience building vessels for the shrimping and fishing industry.

The common route to ownership for this new group was a period of work at local yards or shops. However, a few others left shipbuilding and fabrication to be trained in and do work ranging from mechanics to sales. Even those who went into other fields still worked in industries that related to oil and gas, for example safety equipment sales. New business owners' early work experiences informed the kind of work they thought they wanted to do long-term, and what kind they did not. One co-owner/foreman of a fabrication and topside repair shop (SR035 2008), describing long hours working on "nasty" repairs in the hot summer sun, commented, "The shipyard's where you learn most of this stuff, but you don't want to be there forever." In many cases, work was transitory and allowed workers to accumulate experience with a number of employers, as well as develop the social networks that would be central to business success. Through their earlier work experiences, new owners gained "soft skills" such as envisioning a business plan, and, in the words of one co-owner of a fabrication shop, "pushing a crew...and learn(ing) the paper trail" (SR017 2008). As one co-owner of a fabrication and topside repair shop, who worked at a relative's oilfield services company for over a decade, said:

I saw what I would have wanted if I'd been the guy coming to the yard for the repairs and I figured we could try it out...I didn't know anything about running a business. I have some good friends who are helping me out and I learn from my mistakes, which I think is the best way to learn. Anything I need to know is a phone call away, for repairing or for running the business (SR034 2008).

Some owners went into business for themselves part-time while continuing to work for local shipyards and fabrication shops or businesses. This was the case with PP061 and PP070, two business owners based in Jackson County, MS who opened their doors in the late 80s and early 90s. These men had both begun working at an early age and gained experience as machinists. While unable to go into business for themselves full-time immediately after they had finished high school, both worked for themselves even while employed by large local businesses in the area. PP070 described this period:

I started out with three machines at age 18. I worked for other machine shops and shipyards during that time. They knew that I wanted to start my own business. I used to work 60 to 70 hours a week with a three-man crew...I was working at [a large yard] during the day and then working at nights in my shop (PP070 2008).

Similarly, PP061 started out doing maintenance jobs for local businesses and then moved on to providing machinist services, having decided at an early age to go into business for himself. His major decision was whether to follow in his family's tracks and become involved in commercial fishing or to get into shipbuilding and fabrication.

PP066 was one of the few owners who possessed a four-year college degree. After finishing school he had commenced to work at a large shipyard in MS. However, he was soon disillusioned by the level of pay at this yard and went to work at various other shipyards along the Gulf Coast until the opportunity came to start his own business. With regard to his traveling from one shipyard to another looking to gain varied experience as well as the best wages possible, PP066's early career does not differ from owners who started out in the industry as craftsmen, although of course with a higher degree PP066 was performing different work in the yards than most other owners.

Business owners who got their start in more recent times were similar to those who began earlier in terms of education levels and their long involvement in industry of one kind or another. Owners across time periods generally started working with their hands in industrial settings at an early age. As with previous groups of owners, money was once again a prominent factor in the decision of these owners to join the industry. The options for relatively high-paying work available in many Gulf Coast communities to those lacking university degrees had not changed much since the 1970s.

The number of owners entering the industry from a shrimping and fishing background has declined, certainly due in large part to the overall drop in the profitability of this industry since the 1970s and the accompanying drop in local residents employed as commercial fishermen and shrimpers (cf. Caillouet et al. 2008; Nance et al. 2006). The growing difference in skill sets employed in the shrimping and fishing industries and those required in shipbuilding and fabrication is another important factor. Whereas those involved in shrimping and fishing during the 1970s and prior could attune their skills with relative ease to the needs of shipbuilding and fabrication, such a move has become more difficult with the growing technical sophistication and specialization of the latter. This decline in close connections between the two industries also implies different social networks for groups of owners across time. While earlier owners often started out converting or building fishing and shrimping boats and other equipment and sometimes maintained this work alongside fabrication for the offshore oil industry, newer owners were more closely linked from the time of their entrance with large local companies,

including shipyards. This being the case, newer entrants into the industry described more difficulty in the initial acquisition of clients, being that in many cases they could not rely on previously existing social networks to provide business. In the cases of owners such as PP061 and PP070, part-time work while still employed by other companies allowed them to at least partially establish niches prior to business startup. Additionally, some new owners engaged in professions such as safety equipment sales in which older generations of owners had no experience.

3.5. BUSINESS STARTUP AT THE TURN OF THE CENTURY

More recent business owners partly echoed the rationale of older groups for business startup. As with older owners, new business owners were generally confident of their talent and skill, and liked the idea of being their own boss. New business owners also discussed business startup through reference to socio-economic events and variables. The importance of social networks was attested to by pair of co-owners and another owner who cited knowledge of available waterfront land and the ability to acquire it quickly as critical factors in deciding to open new businesses (SR034 2008; SR035 2008; VP102 2008). Family networks were still of importance in business startup. PP066 was an owner who got his chance to open his own business when his parents decided to put a piece of their property up for sale, and his parents' support contributed to the early success of the business:

The way this business started is I started a machine shop, after moving around a bit, using the property that my parents were going to sell. Then my parents came back to help me out with accounting and that kind of thing when we started getting more business. We didn't take any money out as profit and just put everything back into it (PP066 2008).

Beyond family and social ties, new owners deviated from older groups in some of the ways they accounted for business startup. One important change was an increasingly critical eye towards large local yards and shops and the demands they placed on their workers. Many new owners had worked for large local shipyards prior to business startup, and their decisions for going into business were sometimes based on perceptions of negative elements of these larger companies. One co-owner at a fabrication and topside repair business described a common sentiment this way: If you work for big companies you're just a number. If you miss a day 'cause your son was sick they want to fire you (SR034 2008).

He emphasized his point with an anecdote about his father, who had worked on oil production platforms for 18 years before being laid off so that the company didn't have to pay a high rate of retirement and severance, a practice he claimed was common among shipyards. He continued:

I worked like that for a long time. It's all about respect. Just because the guy's working for me doesn't make me any better than him. Because without people like him I don't have this place here. And without people like me they don't have a job. So we each have our part in making it work...Your employees are your business. That's how I look at it and I guess the big people don't look at it...(If) I would turn into that, my daddy would kill me (SR034 2008).

In SR034's point of view, his shop represented a substantially different style of management and work culture than the larger yards. Other owners seconded this attitude, taking care to differentiate their business from the big companies in the area and mentioning negative work experiences at such locations (PP066 2008). New business owners also described their desire to not work for someone else, or rely on someone else. One owner of a repair yard said that he felt "more secure" when he performed all of the tasks of business administration (SR025 2008), from secretarial to estimation. He attributed his business' success to his centralization of all administrative and management work to his own role.

Business startup based on perceived necessity, a situation first mentioned by owners who began during the downturn period, has increased in the years since. A few new owners described their decision as resulting from the loss of their job at another shipbuilding or fabrication company, or from the lack of skills or opportunities to enter another sector. One repair yard owner described being trapped in a business deal after he was laid off by an established yard during a period of downsizing, and then abandoned by a former potential business partner with whom he had planned to open a new repair yard. This turn of events was fortuitous, as following Hurricane Katrina his repair business grew considerably and renewed his interest in the industry:

Vendors were willing to work with me, people were willing to hire me to do their repairs, and so everything just fell into place and we're busy. After Katrina struck we had a big surge in repair. Even our business today is a direct effect of Katrina and it still will be for a while. Timing was everything for us, but it's a combination of treating people fair, prices, reliable service, and divine intervention (SR025 2008).

A few new business owners described their "need" to open new businesses in terms of a nationalistic or regional response to the import of foreign labor at other companies, a trend which they felt they could not abide. One co-owner of a fabrication and topside repair shop articulated his objection to the import of foreign labor with great passion:

They're importing people from all over. That's not gonna happen here. I wanted a place where me and my friends could make a good living working and support our families. A lot of Mexicans come by wanting to get hired on but it's American-made over here. (If) somebody doesn't like it, well I'm sorry (SR034 2008).

A strong desire to not have to travel for high-paying work—whether to platforms in the Gulf of Mexico or to other states for high-paying pipeline welding work—was another important factor that influenced some in the opening of business. Their wives and families also strongly affected their desire to seek the highest paying work possible at home.

3.5.1. Types of Businesses

In more recent years, the trend away from new build towards other types of work has continued. New owners most commonly went into new component fabrication. Such work included fabricating components such as units (wire-line and cement), boxes (tool, gang, and aluminum), and stairs, handrails, and guardrails for pushboats and tugboats that service the oil and gas industry, as well as for offshore platforms. Although it was not unusual for these new

businesses to fabricate for sectors other than oil and gas—for example, one owner described fabricating a dump bed for a shrimp peeling company (SR016 2008)—most agreed that the oil and gas industry is the mainstay of their work, comprising around 90% of their orders. Co-owners of a new component fabrication business described those products which were not for oil and gas this way:

SR017 (2008): We can fix a bicycle or whatever...

SR016 (2008): You think of it, we'll do it, as long as we can get it in and out of the yard.

Some owners had become increasingly willing to diversify operations and had begun doing fabrication work for clients who had not originally been in their purview (PP061 2008). Relationships between small, privately-owned yards and shops and their large, corporate counterparts have changed over the years. In a few cases, owners reported having actively sought out contracts for component fabrication work with larger companies in shipbuilding and fabrication in the local area (PP061 2008; PP070 2008). In other cases, such involvement with larger businesses was reported as more indirect or less the result of active efforts on the part of owners (PP066 2008; PP068 2008; SR034 2008; SR035 2008).

Repair, either exclusively or in conjunction with another service such as component fabrication, was the other most common line of work to go into. Some began as truck welding businesses and moved into fabrication work in a permanent location once they developed the capital to lease space and acquire the machinery to develop a shop. This pattern was followed by owners in previous groups, such as SR019 and VP103. Other new owners started their businesses as quick repair yards, which required more capital at start-up for the leasing of waterfront land and drydock installation. Either way, new business owners described repair work as consistent and reliable, especially in the years following major hurricanes such as Katrina and Rita.

For owners who started in the 1990s and after, new build work has taken on something of a stigma in terms of the consequences it had for other businesses. The decline in new build had continued unabated since the 1980s, and multiple people cited the quick demise of others' attempts to open businesses based on new vessel construction. Barring a single exception, only established businesses ventured into new build between January 2007 and January 2009. VP102 was the only owner in this group who had managed to make new build his primary focus. As will be discussed below, there are likely a number of reasons for the dearth of new shipbuilding businesses.

With regard to work outside of component fabrication, repair, and new build, one business owner who specialized in new component fabrication reported deriving a portion of his income from furnishing clients with certified divers. This owner had invested in attaining certifications for certain members of his workforce and would now contract these individuals out to large, local businesses in the oil and fishing industry (PP070 2008).

For newer business owners, new component fabrication and repair work constituted the core of running a business in shipbuilding and fabrication. Such component work included fabrication for local larger shipyards. These types of connections between small, privately-owned shops and yards and the larger corporate yards in the area were not reported as a major factor prior to the 1990s. The newer group of owners is not alone in establishing such connections. More long-term owners have also established business relationships with larger yards in recent years. While in several cases larger shipyards and shops rank among the most important clients that small,

private businesses possess, it is also the case that such relationships add another element of instability into the lives of owners and the state of their businesses.

Few newer owners expressed regrets similar to those voiced by older owners concerning the decline of new build work. In contrast to the pre-1980s downturn group of owners, very few new owners ever derived significant income from building for the shrimping and fishing industry. PP070's work on the Mississippi Gulf Coast was rooted in new component fabrication and not the new build work that had mostly occupied owners in the 1970s. As with the first two groups covered in this section, newer owners mostly did not report deriving any substantial portion of their income from government or military contracts, although a few owners, such as PP066 broke this trend. Since the late 1980s, military and government contracts have played a significant role in providing work for a number of large, corporate yards in some study communities. While the new group of owners as well as previous groups did not report much in the way of government and military work, given the fact that a number of them fabricated for large local yards, it is likely that they derived a measure of their income from these sources.

3.6. HISTORICAL AND CONTEMPORARY CHALLENGES AND SUCCESSES

During fieldwork in 2007-2009, all of the owners included in this chapter described their businesses as profitable with a steady stream of work. However, businesses in the industry have faced and continue to face various challenges including workforce issues, work shortages, materials costs, and environmental issues. Some of these challenges were particular to certain time periods, whereas others pertained more generally to business ownership in the industry since the 1960s. Some challenges were mentioned by the majority of business owners, while others were less frequently brought up. Oftentimes, business owners also discussed what they perceived to be their successes in the industry, both generally and in terms of meeting particular challenges.

3.6.1. The Workforce

Workforce issues were the most frequently mentioned concern on the part of business owners. Although such difficulties are not a new phenomenon (see Chapter 4, this volume), the majority of owners argued that difficulties in acquiring a skilled labor force had increased considerably in recent years. Major reasons owners provided to account for this development included the poor work ethic among the current labor force, the uncritical promotion of higher education in Gulf Coast communities, and the effects of the 2005 hurricanes and accompanying phenomena. The complaints pertaining to the allegedly poor work ethic on the part of younger members of the workforce were not solely voiced by earlier groups of business owners who had had a chance to manage older generations of workers (SR025 2008). Nevertheless, it was generally long-term industry participants who attributed the difficulties in acquiring and maintaining a workforce most directly to the lack of work ethic among younger people. Newer owners placed more weight on the fact that individuals interested in the industry were offered inadequate or inappropriate training in Gulf Coast communities. For example, PP066, an owner in Jackson County, MS who started his business in the 1990s, commented on the lack of adequate training options for potential workers in the industry:

We require fairly qualified people here to do things like operate lasers or CNC [computer numerically controlled] equipment. Finding these people is just about impossible... We had a general training program, but Hurricane Katrina sucked up

all of our trainees...What we wish would happen is that they set up a good training program in this area (PP066 2008).

PP061, PP068, and PP070 were other more recent owners who stated a lack of training as the major problem concerning the current workforce. PP066 uniquely interpreted the lack of available local training as among the reasons that his business was able to maintain its niche, since workers skilled in this production process were not available for other companies in the area to recruit.

Despite complaints about the difficulty of acquiring and maintaining a reliable and skilled workforce, some owners also commented on how their operation had been able to hang onto at least a core group of good workers, largely due to a family type atmosphere that differentiated their yards from larger operations. Additionally, a number of owners insisted that they provided a much more interesting and friendly work atmosphere, which allowed them to retain good workers. BM012 was an owner who had gotten his start during the mid-1980s downturn who attested that his business really had not had a hard time maintaining people:

We get a lot of walk-in applications, so we never have to go to the Texas Workforce Centers, or to run an ad in the paper. The walk-ins, these are mostly based on referrals, from friends, family, buddies, but our labor force is more stable... The big yards, they have to deal with big ups and downs... We run at about 75 employees, and our workforce is really steady. Since we're not subject (as much) to the cycles of big projects, we keep a steady number of guys around, including some that have worked here for years, decades (BM012 2008).

It should be noted that the hiring practices at smaller, privately-owned yards and shops were generally more stringent in terms of qualifications than those at larger yards. Several owners in this section insisted that they would not hire anyone who was not a certified first class craftsman (PP066 2008; PP068 2008; PP070 2008; PP072 2008). One reason for this reluctance was the lack of in-house training facilities at most smaller shops and yards. These owners insisted that, financially-speaking, they did not have the resources to invest in training workers who might end up leaving shortly thereafter. Other owners were willing to take on unskilled or semi-skilled workers in helper positions, but these positions generally offered considerably lower wages than crafts positions.

Newer owners were more outspoken in their criticisms of what they viewed as impersonal management styles and work organization at large yards. Many new owners had more experience working for other yards and shops than older groups of owners and had worked in the industry during the period of reorganization in the 1990s. Some more recent owners also considered their businesses successful in the sense that they were among the few, in their opinion, who still offered jobs for local American workers rather than foreign labor. As noted earlier, some newer owners stated that this was one of their reasons for getting started in the industry. Older owners did not mention this as a reason for business startup.

The growth of labor contractors as a high-paying source of employment was another perceived problem related to workforce in many Gulf Coast communities. Some owners held that the failure of many of the contracting companies to provide healthcare and other benefits allowed these employers to offer pay rates sometimes far exceeding those offered by yard and shop owners. At the same time, several owners included in this chapter used contract labor themselves

either to perform short-term tasks for which they could not find workers or to more generally minimize the impacts that uncertain industrial cycles had on their businesses (VP103 2008). This trend has its origin in the industry reorganization of the mid-1990s, where it was originally intended to curtail frequent hirings and layoffs of employees (Austin et al. 2002). Somewhat ironically, in this case a strategy intended to deal with negative impacts of industrial cycles has resulted in the creation of new challenges for owners.

Work shortages resulting from fluctuating industrial cycles have been a concern for all groups of owners at various points of time. As several owners attested, the downturn period of the mid-1980s was not the only time during which business declined considerably. Other periods of work shortage had sometimes put owners in very difficult positions. PP068, who went into business in the 1990s, spoke about one such occasion:

We had a lull year in 2001-2002 and that year we actually had three bankruptcies filed against us, which was bad. Three major companies that we did business with closed down. We had to regroup. We probably used to do \$300,000 worth of business with them every year and then they closed their doors, which was a big hit (PP068 2008).

Given the overwhelming importance that some assigned to the oil industry in terms of its impacts on shipbuilding and fabrication, it is important to note that the businesses referred to in this quote were not related to offshore oil. Owners who got their start in the pre-downturn period did not mention any difficulty with work shortages during this time, except during the initial period of business startup in some rare cases. Since the 1970s, the industry has gone through several cycles when work was readily available, but none of these periods were remembered as constituting as general or lengthy a period of prosperity as the 1970s and early 1980s.

3.6.2. Diversification

Business diversification was commonly mentioned as one response to the cyclical nature of the industry. To an extent, reasons for diversification have shifted from what was initially a specific response to the decline in oil prices during the mid-1980s to a more general ideology embraced by the majority of owners. Nevertheless, some owners continued to phrase diversification in relation to the oil industry. As might be expected, these were generally owners who derived the majority of their business from this industry. Strategies of diversification included both the acquisition of new clients as well as branching out into new production processes. It is worth questioning to what degree diversification is or can be practiced by business owners, and to what extent it remains rhetorical. Many owners still reported receiving an overwhelming portion of their business from the oil industry, a situation that one owner labeled “scary” (SR005 2008). In general, diversification was more successful along the lines of production processes rather than with regard to acquiring work from different clients or industrial sectors.

In addition to figuring as a long-term strategy, temporary diversification was a way to take advantage or recover from unforeseen events. PP061 provided one such example, discussing how his business was able to recover after the 2005 hurricanes through acquiring cleanup work afterwards, which included fabricating for some local casinos which had suffered hurricane damage. In another case, VP104, a business owner, had already diversified from building seismic boats to operating them. He was then able to benefit from environmental regulations which

initially looked highly unfavorable for him and for others involved in the industry by further diversifying his business from its focus on oil exploration:

I still have the seismograph boats, they were working until 2000. Then they were shut down by environmental groups...That played out and now I'm using the boats for coastal restoration. I converted the boat to do environmental work... I was contacted by the state of Alabama to rebuild the reef. I'll transport oyster shells and barge them from the oyster catchers to the reefs (VP104 2008).

Some owners had taken conscious steps to diversify clientele and processes (PP070 2008; PP072 2008). However, many owners portrayed diversification as something that was the natural result of good work practices or certain types of expertise (PP068 2008; VP104 2008; VP068 2008). This was particularly the case in the area of client acquisition, where new clients, whether local to international, were said to be attracted because of solid production processes. PP072 was one of the few owners who discussed actively moving outside of the Gulf Coast to find new clientele.

3.6.3. Niches

A substantial number of owners also described having successfully established and preserved business niches, either with regards to production processes or clientele. Some of these niches went back as far as the mid-1960s. For example, BM032, who started his own shipyard in the 1960s, had largely focused over the years on one type of work, namely fabricating drydocks. BM032 described the conditions that had enabled him to persist in this type of work:

Drydocks are a special commodity. Most shipyards build their own, but a lot buy them. And for a long time, I only had one competitor...So as far as I know, [company] is the only company that specializes in drydocks (BM032 2008).

Drydock fabrication was not the only type of work carried out at BM032's yard. Over the years, he had fabricated a number of fishing and shrimping vessels and taken on various repair jobs to keep the business afloat during the 1980s. Still, over the years he had nevertheless been able to continue to focus on his specialty.

Niches were not always formed immediately following business startup. BM065 and his brother were owners active since 1980, and finally managed to break free of the effects of the downturn through the adoption of pipe rolling in the early 1990s. Pipe rolling turned out to be more profitable and less competitive than deck fabrication. This resulted in the yard establishing itself as one of the few to provide this service in the local area. Establishing a niche and diversification were not necessarily mutually exclusive. Even business owners who made it a point to note the range and variation of their production processes often noted that there were particular components that they fabricated more regularly and which accounted for a greater portion of their income.

3.6.4. Other Challenges

Besides workforce issues and work shortages, the price of materials was perhaps the most common challenge brought up by owners. In contrast to the relative degree of control that owners exercised over workforce problems through the establishment of a favorable work

environment and by cultivating a strong local reputation, there was very little that they could do with regard to fluctuations in the price of materials. All owners who mentioned this challenge held that it had only become a major problem in the mid-2000s (PP066 2008; SR005 2008). Differences in levels of available capital between smaller, privately owned businesses and large companies made variation in the price of materials more difficult for the former to deal with. Smaller businesses, which could not afford to stockpile steel when prices were low, were at a marked disadvantage in an industrial climate where the price of steel could rise several times over in the space of as little as a week. This had led several business owners to attempt to displace the majority of this extra cost onto customers, but as some described, clients were often unwilling to accept these additional expenses (SR005 2008).

Changes in environmental regulations and legislation have also affected shipbuilders and fabricators. Some attributed such developments to a lack of understanding of environmentalists, policy makers, and others as to how the industry actually worked. For example, VP023, a shipyard owner in Bayou La Batre since the 1970s, discussed what had been, in his opinion, the calamitous effect that environmental regulations had had on the industry:

We're a dying breed, small, so with regulations and productivity the east coast yards die off first... We see some amount of disappearance, probably a third [of shipyards] around the country are left in existence. We've been hit by regulations, environmentalists which make it more different to operate and compete in the world market (VP023 2007).

3.6.5. Going Forward

Business owners differed considerably in their general perceptions of the industry, but in general, most owners expressed pride and satisfaction with the work they had done in the industry. None of the owners in this chapter expressed entirely negative views of their experiences working in the industry. Those who had been involved in the industry before the 1980s downturn were more likely, though, to voice more negative perspectives. As might be expected, such owners were more likely to draw comparisons between what they saw to be inferior aspects of the industry today compared to the time period during which they started. These criticisms often centered around the lackluster work ethic of the younger generations of workers as opposed to workers from the 70s and early 80s, although this was not always the case. Other grievances centered on some of the other challenges described above, including work force shortages, environmental regulations, and the lack of readily available training facilities in most Gulf Coast communities.

While money was certainly a prominent factor in the entrance of the majority of owners in this chapter into the industry, this was not the only reason that they had chosen to remain in the industry over time. Shipbuilding and fabrication was not seen as simply equivalent to other options for skilled labor in local communities. Despite the higher wages available in some other local industries, owners commented on the attractions of shipbuilding and fabrication work. BM012 related an anecdote concerning the draw of the industry for some workers:

Wanting to work on the yards is more than just making money, there is a bit of a mystique about working on the yards... once you have it in you, you don't want to go anyplace else, those refinery jobs just don't work out. Yeah, I had a guy, one of my best and long-term employees, he heard about a job in the refinery and wanted

to check it out because the money was so good, but it turned out he just couldn't handle it. He was back a bit later and I asked him how he was doing...he said he was beggin'. "For what"? "For my job, I want my old job back." Of course I gave it to him, and he still works here now. Those jobs just aren't as rewarding (BM012 2008).

As BM012 saw it, the challenges and possibilities for creativity in shipbuilding and fabrication made it more attractive to at least some workers, even at the cost of higher wages that they could earn in another industry. Such a notion was in accordance with the reasons that many owners themselves chose to enter the industry. Most owners insisted that for people who were willing to work hard and tough out the harsh conditions in the yards and shops, the industry could provide a rewarding, high-paying career. Several mentioned examples of relative newcomers who had rapidly advanced in the ranks due to their work ethic and desire to learn. However, at the same time, a good portion of owners who were questioned as to whether they would be in favor of their children working in the industry answered in the negative. VP104 was one such owner, although in his case his children had ended up following him into the business despite his protests:

An education is something everyone needs. I wanted my children to go to college. They both told me, look at how well you did and you didn't go to college. I tell them, think about how well I would have done if I did go to college. I have grandchildren now, I'm larger and heavier, if they don't go I'm probably going to strangle them (VP104 2008).

VP104 was certainly not alone in voicing his strong dislike of the idea of his children carrying on in his footsteps. While a few owners expressed willingness to hire their offspring, all made it clear that work in the industry was definitely a secondary option compared to pursuit of a four-year education. This captures one of the essential dilemmas for shipbuilding and fabrication on the Gulf. Despite the insistence of many owners that the industry is a good way for local people to make a living and a worthy line of work for the younger generation, most owners opposed the idea of their own children following in their footsteps.

3.7. SUMMARY AND CONCLUSION

Over the course of the past three decades, the shipbuilding and fabrication industry on the Gulf has undergone substantial transformations. Concordantly, the paths to ownership, the types of work private yards and shops perform, and owner attitudes towards this work, challenges faced by owners, and more general attitudes towards business ownership and the industry have all changed as well. Prior to the 1980s downturn, the fishing and shrimping industry was the most common route through which new owners entered shipbuilding and fabrication. The social networks and economic presence owners maintained within the shrimping and fishing industry provided them with clients and work even as the emphasis on fabrication for the oil industry began to grow. Since the late 1970s, the relationship of the shrimping and fishing industry with shipbuilding and fabrication has declined considerably in the study communities. Only two members of the second and third group of owners covered here worked in any professional capacity in the shrimping or fishing industry before going into shipbuilding and fabrication (SR005 2008; VP103 2008). The ease of transitioning from the former to the latter has decreased

over the years. The lack of demand for new build and conversion boats may be one factor preventing the more rapid transition of those in fishing and shrimping to shipbuilding and fabrication. The growing focus of the industry on new component fabrication and repair work may entail skill sets that individuals in shrimping and fishing do not possess. The absence of available infrastructure for commercial fishing and shrimping in some study communities and much decreased economic returns are other factors preventing residents from entering into commercial fishing or shrimping in the first place. Decreased returns also mean that there is less capital available for those in commercial fishing or shrimping to attempt a venture into shipbuilding and fabrication.

With the decline of shrimping and fishing as a means of making a viable living, the majority of more recent owners reached their current position after working for varying amounts of time in shipyards or fabrication shops in the area. Unlike the pre-downturn group of owners, several of whom either owned or helped manage businesses in shrimping and fishing prior to entering in shipbuilding and fabrication, newer owners generally did not have this kind of prior experience. With the decline of shrimping and fishing as a valid means of entry into shipbuilding and fabrication, it has become more difficult for owners to gradually transition into the latter without extensive new investment in materials and land. Involvement in the shrimping and fishing industry allowed some in the pre-downturn group of owners to initially begin fabrication on commercial land that was already in their possession. Furthermore, during this time some owners got their start converting shrimping and fishing boats already in their possession for use in the offshore industry, a process which required less capital investment than the new component fabrication that most businesses today engage in.

No other industry has come to replace shrimping and fishing as an industry from which individuals aspiring to business ownership in shipbuilding and fabrication can easily transition. This may not bode well for the ability of small yards and shops to sustain themselves through down cycles of the shipbuilding and fabrication industry. Historically, involvement in fishing and shrimping allowed owners to weather tough times. Even when owners were forced to close businesses, their skills and knowledge related to shrimping and fishing allowed them to find a means of income. Furthermore, owners also continued to derive substantial portions of their income from building for the shrimping and fishing industry when this industry was still profitable in the 1970s and early 80s.

The social and business networks of new owners differed from those pre-downturn owners had upon entering the industry, although over time the significance of networks associated with shrimping and fishing has declined for older owners as well. The type of work that newer groups of owners started out in the industry doing and continue to do reflect these changes. New build work was never a major source of income for the great majority of owners who started out after the 1980s downturn. New owners found niches in repair and component fabrication work, while still remaining willing to fabricate “anything” as a precaution against industry cycles. The older generation of owners has been mostly forced to follow along with this trend, while often regretting the loss of new build work. Newer owners did not express as much concern for the drop in new build construction, as many of them had never carried out this type of work. Instead, these owners often described the broad range of interesting and challenging component fabrication and repair work carried out at their respective shops and yards.

The need for diversification was repeatedly mentioned by owners as a crucial business strategy to counter the more extreme effects of industry cycles. Although owners, especially new owners, reported a willingness to fabricate a wide range of items, a good portion still derived the

vast majority of their business from the oil industry. In this way, diversification appeared more to represent an aspiration of owners than the current reality. Owners have adopted a wider range of production processes in recent years in order to curtail business risk, but the variety of clients, and particularly the variety of industrial sectors from which they obtain business, has remained limited. In a case such as the aftermath of the hurricanes of 2005, the increased ability of small businesses to engage in a range of work proved highly profitable and, in some cases, vital to staying afloat as a business. However, it is unclear how successfully diversification of production processes will sustain businesses through more extended industry down cycles if they are unable to find other steady sources of income outside of the oil and gas industry. Some owners have indeed taken advantage of opportunities in the commercial sector to diversify their business, but these remain in the minority.

Owners of all generations were united in favorably portraying the work that they did at their yards and shops relative to larger businesses in the area. Privately-owned small and medium-size shops and yards were thought to possess a work atmosphere that was much more conducive to good relations between management and workers. Furthermore, some owners attested that smaller yards and shops did not experience the fluctuations in hiring and firing cycles as did larger companies, a fact that contributed to the creation of a more stable work environment. However, several smaller businesses had higher criteria for new hires than did the larger yards and shops in the area, with a number of owners insisting that they would only hire first class craftsmen. Often, in larger yards in study communities, it was possible for unskilled workers to obtain training in a particular craft after hiring on, rather than working as a helper for a period of time as they generally would in smaller yards and shops. This may have been one factor drawing unskilled or semi-skilled labor to the larger yards in the area. Despite owners' claims of superior work atmosphere, even potentially willing unskilled or low skilled workers in the area did not have the option of immediately hiring on at these shops and yards. Additionally, in many study communities, training was not readily available outside of the large yards and shops, which generally possessed in-house training programs (see also Chapter 4, this volume).

Newer owners more commonly based at least part of their decision to open a yard on the undesirability of work in the large yards and shops in the area. Owners who started during the downturn and those who began in the 1990s both had more experience working for large businesses than older groups of owners. Eight out of 13 owners who started out during the pre-downturn period did not have direct experience working for other yards or shops in the area (BM040 2008; BM055 2008; BM065 2008; BM066 2008; VP074 2008; VP104 2008; VP021 2007; VP068 2008). In contrast, all of those included in this chapter who started yards either during or after the downturn had some degree of experience working in the industry. For most recent owners, these work experiences came during the industry reorganization of the mid 1990s, a period characterized by growing automation, the promotion of "lean" production processes, and changes in management styles at yards along the Gulf Coast (Austin et al. 2002). These factors may have influenced the more critical stance of newer owners toward large yards and their pride in the types of operations they themselves ran. Interestingly, while a number of large yards along the Gulf derived a major portion of their business from military and government contracts, few of the owners in this chapter reported such work to constitute a substantial portion of their income. While a few owners did regularly engage in government contract work (PP066 2008; VP104 2008), for the most part, this work has been performed by the larger yards. However, over the years smaller, privately-owned businesses have come to increasingly have working relationships with larger local yards and shops. If such relationships constituted working

on government or military contracts, owners left it largely unmentioned. Nevertheless, the growth in such relationships represents a significant change from earlier times in shipbuilding and fabrication. Only one owner from the pre-downturn group (VP074 2008) mentioned cultivating relationships with local shipyards during the 1970s and early 1980s. With component fabrication assuming a more central role, more small shops and yards are drawing business from larger yards and shops in the area, as opposed to the 1970s and 1980s, when they were generally fabricating directly for the offshore oil industry.

Acquiring and maintaining a stable workforce was the most persistent problem facing current owners, despite their insistence on the superior work conditions in their shops and yards vis-à-vis the larger yards and shops in Gulf Coast communities. More long-term owners were likelier to mention the lackluster work ethic of younger members of the labor force as a major issue, comparing this generation to that which had worked in the pre-downturn period. Newer owners also made this argument, but were more inclined to point to the lack of available training facilities and programs in Gulf Coast communities as reasons for workforce issues. While feelings were generally optimistic about the current state of the industry during fieldwork in 2007-2009, sentiment was more varied with regard to changes that had affected the industry over time as well as the future of the industry on the Gulf Coast. Most owners enjoyed the work they did and regarded it as allowing room for creativity and innovation. However, in the eyes of some, mostly more long-term owners, the decline in demand for new build had lessened the interest and excitement that the job had once possessed when new build was the prime source of income for many shipyards along the Gulf. This was not expressed as frequently by owners who had mostly entered the industry focusing on new component fabrication.

Some older owners voiced greater doubts about the long-term sustainability of the industry, citing increased environmental regulations, an aging workforce, and a lack of new skilled and willing workers as cause for worry. While owners' views on the industry, in terms of what it had given them and their families, were generally positive, almost all were against the idea of their own children following in their footsteps. In an ironic twist, many owners cited many of the same factors in supporting this opinion that they identified in the younger generation as a lack of work ethic. Some owners clearly recognized this and acknowledged the dilemma. One prediction is that in the coming years, while shipbuilding and fabrication remains one of the higher-paying work options for skilled and unskilled labor along the Gulf, high wages may not be enough to attract younger generations of workers in communities where the industry often has a reputation for constant layoffs and dangerous and dirty conditions. Given the prevalence of layoffs in the history of shipbuilding and fabrication on the Gulf, it is perhaps unsurprising that at least a portion of the workforce is opting to work for labor contractors where they can make what are sometimes considerably higher wages while demand is up. The future of privately-owned businesses in the industry, and the industry itself to an extent, depends on the availability of training for aspiring workers, a solution to the "problem" of contract labor, and perhaps above all, addressing of the dangers and hardships that result in much of the younger generation being unwilling to head in the same direction as their predecessors.

3.8. REFERENCES

- Austin et al. 2002. Social and Economic Impacts of Outer Continental Shelf Activity on Individuals and Families. New Orleans: U.S. Dept. of the Interior, Minerals Management Service, Gulf of Mexico OCS Region.
- BM010A. 2008. Personal communication. Experiences as worker and owners in shipbuilding and fabrication industry. Discussion with Ben McMahan. Fabrication shop owner. Bridge City, TX. March 19.
- BM010B. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Ben McMahan. Shipyard owner. Bridge City, TX. April 17.
- BM012. 2008. Personal communication. Business really had not had a hard time maintaining people. Discussion with Ben McMahan. Fabrication shop owner. Port Arthur, TX. April 10.
- BM032. 2008. Personal communication. Labors have not always been eager to work in the shipbuilding and fabrication industry. Discussion with Ben McMahan. Fabrication shop owner. Orange, TX, May 6.
- BM040. 2008. Personal communication. Growing economic impact of the oil industry on shipbuilding and fabrication. Discussion with Ben McMahan. Shipyard owner/operator. Sabine, TX. May 13.
- BM055. 2008. Personal communication. Experiences as worker and owners in shipbuilding and fabrication industry. Discussion with Ben McMahan. Fabrication shop owner. Iberia Parish, LA. June 4.
- BM065. 2008. Personal communication. Experiences as worker and owners in shipbuilding and fabrication industry. Discussion with Ben McMahan. Shipyard owner. Morgan City, LA. June 10.
- BM066. 2008. Personal communication. Experiences as worker in the shipbuilding and fabrication industry. Discussion with Ben McMahan. Shipyard owner. Morgan City, LA. June 10.
- BM116. 2008. Personal communication. Experiences as worker and owners in shipbuilding and fabrication industry. Discussion with Ben McMahan. Fabrication shop owner. Morgan City, LA. August 5.
- Caillouet Jr., C.W., R.A. Hart and J.M. Nance. 2008. Growth overfishing in the brown shrimp fishery of Texas, Louisiana, and adjoining Gulf of Mexico EEZ. Fisheries Research (92):289-302.
- Margavio, Anthony and Craig Forsyth. 1996. Caught in the Net: The Conflict between Shrimpers and Conservationists. College Station, TX: Texas A&M University Press.

- Nance, James, Walter Keithly, Jr., Charles Caillouet, Jr., John Cole, Wilson Gaidry, Benny Gallaway, Wade Griffin, Rick Hart and Michael Travis. 2006. Estimation of Effort, Maximum Sustainable Yield, and Maximum Economic Yield in the Shrimp Fishery of the Gulf of Mexico. Report to the Gulf of Mexico Fishery Management Council.
- PP061. 2008. Personal communication. Experiences of working and owning a business in shipbuilding and fabrication industry. Discussion with Preetam Prakash. Fabrication shop owner. Jackson County, MS. July 29.
- PP066. 2008. Personal communication. Experiences of working and owning a business in shipbuilding and fabrication industry. Discussion with Preetam Prakash. Fabrication shop owner. Jackson County, MS. July 17.
- PP068. 2008. Personal communication. Experiences of working and owning a business in shipbuilding and fabrication industry. Discussion with Preetam Prakash. Fabrication shop owner. Jackson County, MS. July 22.
- PP070. 2008. Personal communication. Experiences of working and owning a business in shipbuilding and fabrication industry. Discussion with Preetam Prakash. Fabrication shop owner. Jackson County, MS. July 24.
- PP072. 2008. Personal communication. Experiences of working and owning a business in shipbuilding and fabrication industry. Discussion with Preetam Prakash. Fabrication shop owner. Jackson County, MS. July 28.
- SR005. 2008. Personal communication. Experiences as worker and owners in shipbuilding and fabrication industry. Discussion with Sarah Raskin. Fabrication shop owner. Houma, LA. June 24.
- SR016. 2008. Personal communication. Experiences as worker and owners in shipbuilding and fabrication industry. Discussion with Sarah Raskin. Fabrication shop owner. Houma, LA. July 7.
- SR017. 2008. Personal communication. We can fix a bicycle or whatever. Discussion with Sarah Raskin. Fabrication shop owner. Houma, LA. July 7.
- SR019. 2008. Personal communication. Worked his way up to second class welder. Discussion with Sarah Raskin. Fabrication shop owner. Galliano, LA. July 9.
- SR025. 2008. Personal communication. After Katrina struck we had a big surge in repair. Discussion with Sarah Raskin. Fabrication shop owner. Houma, LA. July 10.
- SR034. 2008. Personal communication. Experiences as worker and owners in shipbuilding and fabrication industry. Discussion with Sarah Raskin. Fabrication shop owner. Larose, LA. July 31.

- SR035. 2008. Personal communication. Experiences as worker and owners in shipbuilding and fabrication industry. Discussion with Sarah Raskin. Fabrication shop owner. Larose, LA. July 31.
- VP021. 2007. Personal communication. New shipyard in Bayou La Batre, AL in the late 1970s. Discussion with Victoria Phaneuf. Fabrication shop owner. Coden, AL. July 19.
- VP023. 2007. Personal communication. Experiences as worker and owners in shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Fabrication shop owner. Bayou La Batre, AL. July 23.
- VP024. 2007. Personal communication. Experiences as worker and owners in shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Fabrication shop owner. Bayou La Batre, AL. July 23.
- VP068. 2008. Personal Communication. Experiences as worker and owners in shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Fabrication shop administrator. Bayou La Batre, AL. 14 May.
- VP073. 2008. Personal communication. Experiences as worker and owners in shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Fabrication shop owner. Bayou La Batre, AL. May 22.
- VP074. 2008. Personal communication. Experiences as worker and owners in shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Fabrication shop owner. Bayou La Batre, AL. May 22.
- VP102. 2008. Personal communication. Experiences as worker and owners in shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Fabrication shop owner. Bayou La Batre, AL. June 17.
- VP103. 2008. Personal communication. Experiences as worker and owners in shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Fabrication shop owner. Coden, AL. June 17.
- VP104. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Shipyard management. Bayou la Batre, AL. June 18.

4. ON THE YARD

4.1. INTRODUCTION

In any large or medium shipyard or fabrication shop on the Gulf Coast, it is possible to view a remarkable number of production processes at work at any given time. These activities range from welding work done on the yard floor to the formation of public relations campaigns targeting local communities. This diversity demands the presence of individuals in yards and shops with highly varied skill sets and job assignments. This chapter aims to provide an in-depth look into the types of work done in the medium and large shipyards and fabrication shops on the Gulf and to reveal the job perceptions and experiences of the different groups of employees carrying out these various tasks.¹ Further, this chapter tries to articulate the connections and relationships between various employees on the yard, from long-term salaried personnel in the human resources office to trainees just getting their start in learning basic welding techniques.

This chapter centers discussion and analysis around four general areas found in most large shipyards and fabrication shops: the training facility, the yard floor, the engineering department, and the human resources and management offices. This will allow a view of shipyards as composed of a diverse array of individuals carrying out sets of interrelated processes. Of course, interrelated does not imply seamless, and part of this chapter will also account for differing experiences of associated phenomena among workers in different areas of shipyards and fabrication shops. Each section will discuss the experiences and perceptions of those workers most commonly found in that particular area. For example, the section focusing on the training facility will discuss training instructors and trainees. In a select few cases, workers such as union representatives who are not usually present in the yard or shop but who do have significant dealings with different groups of employees, will be covered in the section which most accurately represents their involvement. This general, geographically-oriented format is not intended to provide a true-to-life account of any one yard, but rather to provide a sketch of the myriad perspectives and experiences involved with production processes on most medium and large yards and shops. While some small yards and fabrication shops may also possess the various sections, and groups of employees discussed here, the focus in this section will be on medium and large yards. For some information on the workings of smaller yards and shops, the reader can refer to Chapter 3, this volume, pertaining to private business owners in the shipbuilding and fabrication industry.

Each section will begin with a brief depiction of the area of the yard that is of concern and then move on to a discussion of those workers most commonly found within that area. The sections will examine initial training experiences, formal and informal means of acquiring additional experience and training in positions in these areas, challenges and successes of various jobs, and general perceptions of different jobs in the shipbuilding and fabrication industry and perceptions of the industry as whole. This chapter draws upon discussions with a wide range of participants ranging across all of the Gulf Coast communities covered in this study. The great majority of participants were white men, mostly in their 30s to 50s. However, a few discussions

¹ Many of these jobs are performed on the smaller yards as well, but they are performed by a small number of people who each have multiple jobs. This chapter focuses on the differentiation of the jobs and spaces and the relationships among the people who occupy them.

with women as well as non-white employees are also cited here. It should be noted that many of those cited in this section have worked numerous jobs during their careers in shipbuilding and fabrication. Thus, in many cases, the experiences of individuals are cited for occupations that they are no longer involved with. For example, the section that follows discusses the training experiences of a number of individuals who were no longer trainees along with the experiences of people who were trainees at the time of fieldwork in 2007-2009. In those cases where the passage of time has resulted in pronounced changes in the experience of a particular position, this will be noted and taken into account in analysis.

4.2. TRAINING FACILITY

The majority of large yards and shops on the Gulf Coast had some type of training facility located either on the yard or shop floor itself, or in a nearby property. In general these facilities served the purpose of both training new employees who were not up to par in a certain craft or who needed an introduction to the specific way in which processes were carried out in the yard or shop. Training areas also allowed for experienced employees to attain additional training in various crafts and skills. Full-time training instructors were present in training facilities to train both of these types of trainees.

In some cases, yards and shops sent workers to community-sponsored training programs to attain basic or advanced training. Such programs varied in size and training offered. The most expansive community programs offered training in advanced welding skills that brought in even those craftspeople with considerable experience working in shipbuilding and fabrication and other local industries. Welding was the main skill that community programs concentrated on providing training for, though instructors at some programs discussed the possibility of adding a more diverse array of classes that included other crafts such as shipfitting, in years to come.

4.2.1. Training

Most of today's training instructors at large Gulf Coast shipyards and shops received their initial training either on the job, in Vo-Tech programs, or in formal apprenticeship and training programs at large yards in the 1970s and 1980s. In some cases, training instructors had acquired initial experience then taken some time off to work in another industry before reentering shipbuilding and fabrication. For example, VP098, a female training instructor in the painting department at a large yard in Mississippi, had gotten her start as a painter elsewhere and had taken some time off from the craft before deciding to pursue it again in the shipyards:

I was drawing blood. I got tired of it...I used to work at [another shipyard] a while back, passing the first class test was pretty easy, I passed it. I started learning the different techniques here (VP098 2008).

In terms of their initial training, instructors were similar to the yard and shop owners covered in Chapter 3. Training was readily available in many Gulf Coast communities in the 70s and 80s, and a number of future training instructors took advantage of this fact. None of the instructors who participated in the study had a formal college degree. Most instructors had entered the industry during the 70s and 80s. Those few instructors who had gotten their start in more recent years also attained their initial training in much the same way, either acquiring skills on the job in one of the large shipyards in the area or going through a formal training program in a local

yard. No training instructors reported attending community sponsored training programs for their initial training.

Attitudes on the relative worth of formal training programs and on the job experience were mixed among training instructors, as they were among most groups of employees. Some instructors believed that there was no real way to convey the experience of working in the shipyards in a training program, whereas others credited certain training programs in local yards with amply preparing trainees to work in the yards. For example, PP036, a pipe fitting instructor at a large Mobile yard, had attained his training in a formal four year training program and who discussed how the training program served to get him his first training instructor position in the shipyards:

After I got out of the program they set me up in a position that they called a mentor position. Basically I was a paid instructor and I was in charge of 30 apprentices. Being in this sort of position got me generally interested in teaching and training (PP036 2008).

Thus, for PP036, formal training served an important purpose by not only imbuing him with valuable skills, but with providing an opening into a training instructor position which he reported enjoying working in. The range of training programs in shipyards and fabrication shops across the Gulf ensures that the skills trainees pick up in training programs and the opportunities that open to them thereafter are often contingent on the particular training program. However, most training instructors agreed that programs at least provided a foundation from which new trainees could then develop their skills on the job.

Trainees were, of course, undergoing their initial training at the time of fieldwork. In some Gulf Coast communities, which possessed well-known community-sponsored training programs, a good portion of new employees in local shipyards were sent to such programs to attain their basic training. However, most large yards also operated in-house training programs, where both new and continuing employees could attain additional training. Some continuing employees were also new trainees in the sense that they had very little or no prior experience with the craft that they were seeking to obtain training in. Continuing trainees generally spoke of a desire to better themselves or to become involved with a new craft and take advantage of opportunities for advancement when questioned as to their reasons for seeking training. Those who were new to the industry commonly cited previous “dead end” jobs and the desire to become involved in careers that would provide room for advancement as primary motivations for being in training programs. Of course, the relatively high wages paid by the shipbuilding and fabrication industry were also among the major attractions bringing and keeping people in the shipyards.

Initial training was available with various degrees of specificity, intensity, and length in various yards and shops and had been so historically. For example, some who were currently training instructors in the yards had participated in four-year training programs whereas others had gone through basic orientations and had picked up the majority of their experience on the job. Similarly, the programs that continuing and new trainees were currently enrolled in in the training areas in different shipyards were highly varied. Some yards offered extensive classes in advanced subjects such as non-destructive testing, while others featured a more basic set. Initial training for those new to the crafts was usually very much hands on. In most large yards, unskilled or insufficiently skilled trainees were given an initial safety and general orientation and were then entered into a training program, which they generally attended until they were capable

of passing a certification test. In some yards, training programs followed a formal schedule, at the end of which employees were certified in their craft.

Initial and continuing training in the crafts took place on the floor, in the training area. New and continuing employees who were attaining training in the same craft, for example stick welding, received this training at the same time. Most training areas had classrooms as well, but these rooms were not used to teach the crafts. Training classes were held at various times of day, and class sizes ranged from a few students to as many as 50 or 60. Instructors generally maintained an unobtrusive presence, observing from the side of the training area or walking around, and occasionally pointing out the proper way to carry out a technique or answering a question. Tests in company training programs usually consisted of correctly performing a certain technique or procedure. In the yards that offered advanced classes in subjects such as non-destructive testing and blueprint reading, such classes were generally held in a more typical classroom setting, often located close to the training area for the crafts. While the emphasis with these advanced skills was also on active performance, the procedure for teaching and testing in these cases was more academic, with written assignments and examinations.

4.2.2. Skill Acquisition

As might be expected, training instructors were by and large people who had spent a substantial amount of time in the shipbuilding and fabrication industry. Training facilities in large yards seemed to most commonly train welders, but this was not the only craft for which training was available in some yards. In a number of the largest yards, training was available for every major craft that was in use in the production process. Training instructors had not necessarily worked their way up through the ranks at a particular yard to reach their current positions. A good number of training instructors had worked at several locations and in a number of different crafts before attaining their current positions. One instructor at a large Mobile yard presented this type of career history in discussing his time in the industry prior to assuming his current role.

I used to run the road. But when I came back this time I came back to stay. I was on the road until about five years ago when I hired on here. I was chasing money in my younger days. I went all over the US. I was mostly working for contractors. I did all kinds of things. I was a boilermaker, I worked in ironworks, welded, and shipfitted (PP059 2008).

PP059 had originally started out in the industry as a shipfitter but had acquired welding and other skills during his time “running the road”. Thus, in some ways, his time travelling had been highly beneficial in that it had enabled him to acquire skills and experience that were held to be valuable in many Gulf Coast communities. Other training instructors had in fact stayed, for the most part, within the ranks of a particular company and acquired their skills this way before ending up in their current role.

Several training instructors believed that effective communication and teaching skills were the most important abilities for their positions. Some instructors mentioned that these were skills that they had had to learn once they took a training instructor’s position. In some cases, growing into the role of a training instructor required substantial effort on the part of individuals who initially found their personality to be ill-matched for what was required. Others stated that while they had possessed a good deal of work experience with their crafts prior to becoming

instructors, being instructors made it necessary for them to acquire a more technical knowledge of those tasks that they had previously carried out with little consideration. Thus, trainees were not the only ones acquiring new skills in the training areas.

Trainees generally gained new skills by the process of carrying out the actual processes rather than through more detached academic instruction. Some training programs were actively intended to “weed out” new trainees who were not cut out to work in the shipyards and thus subjected trainees to a range of dirty and difficult conditions, including working in the elements and in cramped spaces. Training programs generally exposed trainees to a variety of tasks and situations and, sometimes, to a range of crafts as well. In some cases, training occurred on the job as well, with new low-skilled employees being assigned to work under the supervision of a worker with considerable experience who would decide when the trainee was ready for his or her certification test. Training instructors emphasized that initial training was intended to be as true-to-life as possible. Following along with this stance, absences and other infractions on the part of trainees were treated in the same way as they would have had they been regular employees.

4.2.3. Job Experiences and Perceptions

Most new and continuing trainees were positive about the prospect of acquiring new skills. Continuing trainees were sometimes led to seek training due to unsatisfying experiences working in other positions in the shipyard or fabrication shop. PP089, for example, had worked for the majority of his 27 years in shipbuilding and fabrication as a painter and blaster. However, during this time, he had the opportunity to gain basic knowledge and skills in welding and was finally able to enter into a formal company training program to become certified as a welder.

A number of new trainees referred to their position in the shipbuilding and fabrication industry as a positive improvement over their previous “dead-end” jobs. In contrast to these earlier positions, working as a welder or in another craft in shipbuilding and fabrication offered the possibility of high wages relative to much else of what was available in local communities as well as the chance to master a skill which took time and effort to learn properly. In the case of PP091, a trainee at a large yard in Moss Point, Mississippi, wages definitely took precedence in his reasoning for entering into work in the yards:

Oh man, I've worked all kinds of jobs. I worked at grocery stores, fast food. I went back and forth a lot between these kinds of jobs. On the Gulf Coast you have to be working in the shipyards to make any money and to feed your children (PP091 2008).

Thus, for most new trainees, other available jobs had proven inadequate either for monetary reasons or because the tasks they entailed were not sufficiently interesting or challenging.

In general, training instructors expressed considerable satisfaction concerning their current position. As mentioned earlier, a number of those working as instructors in large yards had travelled widely in pursuit of work in their younger days. Thus, among some instructors, there was a sense of satisfaction at having found a stable occupation that they enjoyed. Some instructors related that teaching had originally presented a challenge, but that given development of the proper communication and teaching skills, the job was highly rewarding. By and large, training instructors enjoyed being in a position where they could pass on knowledge and train the next generation of craftsmen.

Despite this largely positive stance on their current position, training instructors also voiced a number of concerns, both about training programs specifically and about the shipbuilding and fabrication industry as a whole. Instructors were often proud of what their training programs had accomplished, there was also a concern among instructors in most yards that the training that new and continuing employees received in training areas would end up costing the company since many workers were held to frequently switch jobs looking for the best deal. PP058 was an instructor at a large Mobile yard who voiced an opinion:

A lot of people want to get out of the shipyards and go to work in construction. A lot of people have gone over to construction because the shipyards have not caught up to construction in terms of pay...[the shipyard] will keep taking people back. We will have some people that work here for two weeks and then leave (PP058 2008).

Other workers were held to lie about their levels of certification in order to make “first class wages”, although they were clearly not qualified. Other instructors complained that another problem with training programs was that workers were not taking full advantage of the classes offered, especially more advanced classes:

The notices for the classes are posted all around the yard and they just sign up. For this structural welding class only one person showed out of the 14 people that signed up. Look at their departments. There are lots of people in painting or unskilled labor, or helpers. These people can use this to advance but it’s the fact of leaving their job and going right back to work in the morning so it is a problem of motivation (PP067 2008).

One other grievance that training instructors voiced concerning training programs was that no training program could completely capture what it was like to work on the yard. Thus, despite the best efforts of training programs, some workers started work on the actual yard floor with little idea of what awaited them. Training instructors and other long-term employees mentioned the unexpected emergence of issues such as a fear of heights in those who had never experienced working in a shipyard before. Yard tours for new workers as well as a portion of training involving working on actual projects on the yard helped to at least partially eliminate this issue on many yards. However, it was the case that some workers still did not fully understand what they were in store for until they actually made it out on the yard. VP091b, a training instructor at a large shipyard in Jackson County, MS, related a story concerning a recent arrival in the shipyard:

Many people are not prepared for the conditions. We got one guy a little while ago who had a very tough time getting used to the heat the first couple of days he was on the yard. On the first day out of the shop they had put him to work on these modules right here. He had only been welding for perhaps half an hour when I noticed that he was working extremely slow, welding just a few inches at a time and then stopping. He was dripping with sweat and saying that he couldn’t take any more. When I came back just a little while later, the man was almost passed out belly first on the hot steel (VP091b 2008).

The man whom VP091b was referring to was one who had received training in the indoor facility on the yard. However, as VP091b's anecdote amply demonstrates, such training was sometimes not enough to alert new workers to the full range of conditions found on the yard. It should be added that VP091b, like most other training instructors, believed that if new entrants into the industry could tough out the first few weeks on the job, then they would be able to settle in a bit more and begin to start learning their craft in earnest. The amount of time that it was thought to take for a new trainee to become a skilled craftsman varied from training instructor to instructor, but most seemed to settle on the period from six months to one year.

4.3. YARD FLOOR

The yard floor likely resembles closest what most people think of in relation to the shipyards. A wide range of employees, including those in the various crafts, work on the yard floor. Organization of work on the yard floor differs amongst large yards. However, in general, a number of craftspeople are assigned to a foreman, who in turn reports to a superintendent. Superintendents generally serve as the liaison between employees on the yard floor and those in upper management and human resources. According to several long-term workers at large yards, work organization on the yard floor changed substantially following the advent of modular construction in the 1960s and its subsequent adoption by yards on the Gulf Coast. While the production process became increasingly streamlined, there was also a cost in the sense that modular construction generally entailed the majority of employees on the yard floor performing the same repetitive tasks and thus gaining experience with only a single aspect of production as opposed to the situation in previous years, where craftspeople on the yard floor worked on a variety of tasks throughout the production process.

4.3.1. Training

Given the enormous diversity in tasks and job descriptions on the yard floor, it is perhaps obvious that training experiences would vary considerably as well. Nevertheless, it is possible to speak of some generalities among employees on the yard floor. For the most part, employees whose work centers in this area of the shipyard entered the industry either directly out of high school or after some additional vocational training. Few employees on the yard floor, management included, possess four-year college degrees. The majority of current yard floor management attained their training in one of the crafts, either in the same yard that they are currently employed, in another Gulf Coast shipyard, or in a local Vo-Tech program. Relatively few employees on the yard floor hailed from communities outside of the Gulf Coast, although this was not always the case historically-speaking. Some older workers spoke of having attained initial training and experience through working with their fathers as children and adolescents. Such workers often came from families that were involved in the shrimping or fishing industries, similar to the earlier business owners discussed in the previous chapter. Some older workers maintained that the expertise of previous generations of workers who had come of age and entered the industry already familiar with physical labor and a variety of skills could not be matched by today's available workforce, most of whom were held to have grown up in far different conditions.

Training experiences of older and younger workers varied from participation in extensive apprenticeship programs that took years to complete to picking up the majority or entirety of skills required informally on the job. SR023, for example, a welder at a yard in Larose, Louisiana, took the latter route:

I needed the money. I was a shrimper and that industry was going downhill and [shipbuilding and fabrication] had boomed up... I used to deliver oxygen and setaline and I knew all these people and it just went from there...I could make a weld like that when I came in (demonstrating with his fingers about three quarters of an inch in length). That's the best thing here. You can learn. I was a real greenhorn but now I'm starting to learn my job (SR023 2008).

SR023's experience with training also demonstrates the informal relationships that still play important roles in work organization and recruitment in many Gulf Coast communities associated with shipbuilding and fabrication. On the basis of his personal connection to people on the yard, as the man who delivered materials, SR023 attained a job as a welder and then took advantage of informal training opportunities on the yard to develop his skill at the craft.

4.3.2. Skill Acquisition and Advancement

A number of long-term employees in shipyards and fabrication shops had worked in a variety of different positions during their time at a particular yard or shop, or in the industry as whole, and had gained valuable skills in this fashion. VP013, for example, currently worked as a supervisor at a large Mississippi yard, but had moved through a variety of positions since starting out at the yard:

I started with carpentry work, so it didn't take long to catch on to. The second contractor moved me from the joiner to the planning production group, like what I'm doing now, coordinating materials (VP013 2007).

VP013 had never participated in a formal apprenticeship program, although one was available at the yard where he worked. Instead, he had acquired his skills through interaction with the employees in the various departments where he was placed. VP013 had advanced considerably during his time in the industry and was of the opinion that the processes for advancement had been refined over the years and were largely the result of hard work:

Whenever you showed skills you were promoted...There is a formal process that a person has to go through to get promoted, the job opening is posted on the intranet, you send in your resume, you go to an interview. They select the best candidate for all the levels. The process is much more fair, it allows anyone to apply (VP013 2007).

While VP013 endorsed the notion that advancement in the shipyards was open to any worker who put in sufficient effort and was possessed of adequate skill, others were of the opinion that promotion was often contingent on factors other than one's work ethic and skill. PP134 was an African American female worker in the electrical department at a large Mississippi yard who insisted that promotion in the yard was based on considerations other than simply a worker's skill level and experience:

I've been passed over for a lot of positions that I wanted and then they'll ask me to train some kid for that supervisor track position. I asked my foreman about this

at one point and the way he explained it made some sense but it didn't completely make sense. He said that while some people might have more experience, the company was promoting and hiring people with an eye towards their potential for the company... a lot of the mistakes on the yard are the result of these young, inexperienced people in supervisor roles (PP134 2008).

Some workers went so far as to claim that the only way of getting promoted on some yards was to quit and then hire back on for a higher wage, or at least threaten to quit in order to prompt a wage increase (VP110 2007). VP039 was another worker at the same Mississippi shipyard who, while acknowledging that factors such as attendance were of importance in promotion, attested that family connections were of considerable importance in determining who was promoted. Furthermore, according to VP039, departments and positions on the yard were still heavily segregated by race with, for example, African American workers largely composing the less skilled and less prestigious painting departments and with management almost exclusively constituted by whites. Some held discrimination in the yards to operate not simply along gender or racial lines, but as also possessing a relationship to age, with some mentioning the tendency for management at some yards to try to convince older, more highly-paid workers into retirement and then sometimes hiring them back on in consultant roles which did not feature the same benefits.

4.3.3. Job Experiences and Perceptions

The majority of workers on the yard floor acknowledged a number of positive aspects about working in shipyards and fabrication shops on the Gulf Coast. The relatively high wages paid by the industry was high on the list of factors. Others on the yard floor enjoyed the sense of mission or purpose which came with working on massive, multi-year projects. Coinciding with this was a feeling of pride in knowing and actually viewing contributions that one had made along the way in a finished product, particularly in a newly finished vessel. In some cases, this was accentuated by the fact that a good portion of the work done at some large Gulf Coast shipyards was for various Navy contracts. A union representative at a large yard in Mississippi summed it up:

The pride in production of these men is phenomenal. I've worked here and on other jobs in my spare time, but I've never seen that level of pride. They say "my kids may serve on that ship." It's good to work with that kind of people (VP033 2008).

Still, several older workers seemed to feel that the level of pride that people took in their work over the years had declined. VP013 (2007) believed that a major reason for this development was the transition from one form of management and work organization style to another. While acknowledging the newer form of work organization as effective and efficient in many ways, he also believed that this transition had rendered the yard he worked at overly corporate, to the point that there was no longer a sense of any personal relationship with customers, and thus little reason for workers to care about much besides their paycheck.

Some held this change to be partially the result of the decline in new build work and the rise of repair work to a position of prominence in terms of what brought in the majority of income for local shipyards. Several yard floor workers, like the private business owners covered in the previous chapter, voiced their regrets concerning the drop in new build work and the rise in

repair. However, not all were of this opinion. PP036, who currently worked as a training instructor in the pipe fitting department, recalled that contrary to being an attraction, the profusion of new build work at a large Mississippi yard was among the factors that had led him to leave this yard for one in Mobile where repair work constituted a greater portion of the work schedule. PP036 favorably regarded repair work because of its “variability” as opposed to work on new builds. Unlike other workers who described the satisfaction of new build work, PP036 seemed to perceive new build work on a multi-year contract as tedious and repetitive.

Besides changing relationship with clients and changes in the actual types of work done in yards and shops in the Gulf, another transformation that had accompanied changes in work organization and yard-client relationships was the restructuring of physical operations on the yard to fit a new “lean” model. The “lean” model called for reorganization of the shipyards and fabrication shops to streamline production processes and to prevent what was considered an unnecessary and inefficient buildup of raw materials on the yard. This transformation was part of the more general reorganization processes in the industry on the Gulf in the mid-1990s, and in some ways mirrored transitions in other major U.S. industries throughout the 1980s and 1990s. Clearly, this transformation had an effect on materials and equipment available on the yard. While acknowledging that previously shipyards had at times appeared sloppy and cluttered, some workers who had experienced both systems argued that in more recent times it had become increasingly hard to locate needed materials on the yard, due to the emphasis on maintaining a “lean” operation. VP033, who had worked since the 1970s as an electrician at a large Mississippi yard and who worked as union representative as well, discussed some of the positive and negative aspects of this transition from the point of view of someone who was actually on the yard:

With lean management they've cleaned everything up. Now there are no stock piles and the yard looks neat...With lean production you can't stockpile...We used to have a junkyard on the east bank with stuff stripped off ships that came in for repair. That way when the [client] wanted something, we'd go get it and then they'd have their part and everyone was happy. It was metal, it didn't go bad. Now we can't do it, it goes to a scrap yard. It does make the yard look nice, but you can't stockpile, or hold valuable parts. Management just sees it as junk. I've told them, but all they say to me is “lean works”. I don't manage, so I don't have to answer to stockholders (VP033 2008).

On the whole, union presence was rare in shipyards in the Gulf. However, in those cases where shipyard workers were involved in a union, union representatives took considerable pride in their accomplishments. For example, VP033, quoted above, regarded union presence as one of the major factors that had substantially changed working conditions for yard floor workers at his particular yard. Union presence was also responsible, in his opinion, for the relatively amicable relationship between management and yard floor workers.

For some more long-term workers, familiarity with a certain shipyard's organization, workforce, and production processes was an important factor in their decision to stay put at a given yard as opposed to searching for more money at other yards, like many of their counterparts. SR021, for example, was a foreman at a large yard in Larose, Louisiana. While many of his fellow shipyard workers left frequently to pursue what they perceived to be better or

higher paying opportunities, SR021 had remained in the same location largely due to the comfort and familiarity that he had acquired with yard operations and personal over the years:

I don't want to move to a different place. I'm settled here. I know the routine. If you go to a different yard it may be more pay but they may have a totally different way of doing things that you have to learn and comply with, and what if you prefer your old ways? Then you have problems (SR021 2008).

For SR021 and others, remaining at a particular yard long term had the additional, important benefits of providing stability in terms of their being able to see and spend time with family. While offshore work was commonly recognized as enabling one to make considerably more money than they could working in the shipyards or most other land-based work, several workers on the yard floor voiced their reluctance to transition to this type of work due to the sacrifices it would demand in terms of their family life. VP110, a worker at a large yard in Mississippi, in fact enjoyed working offshore but refused to do so because, as he put it, "I'd rather be home with my girl. I want to go home every night."

While most workers on the yard floor found at least some aspects of working in shipyard rewarding, some also voiced negative feelings and a certain degree of resignation about working in the yards, especially relative to the possibility of working in a white-collar position. However, it was held to be very difficult for someone who had worked in the shipyards for any considerable amount of time to adjust to making less money:

This is one of those jobs where you get up every day and try to figure out how not to go. But once you get into it, you become first class, get first class money. It's hard to leave that to go anywhere. If I would follow my wife and get an office job, I'd be at the bottom (VP110 2007).

Thus high wages, one of the major factors drawing younger workers into the industry today, was also often the foremost factor keeping older workers in, despite the common rhetoric extolling the superior work ethic and interest in the job of the older generation. Many of the complaints among yard floor workers about work in the shipyards were related to the dangers and unpleasant conditions on most yards.

4.3.4. Safety, Health, and Conditions on the Yard

Safety was an issue that was held by a number of workers on the yard floor as a highly significant aspect of working in the industry. Perceptions of safety and of one's relationship to safety reflected one's position. Supervisors, for example, talked about safety largely in terms of effective communication between themselves and employees.

Craftspeople, on the other hand, were generally concerned with safety in more individual terms, being as they were not responsible for a number of other people on the yard floor, as were people in management. While some had been lucky enough to avoid serious physical harm during their time in the shipyards, others had not been so fortunate. Workers in the crafts sometimes perceived a move into management as a favorable one due to what were, in most cases, the much-decreased bodily risks of such jobs as opposed to physical labor on the yard floor.

In general, those in management or those in the safety department in large yards attested that safety in the shipyards had undergone considerable changes for the better over the years, despite the fact that it still remained a major issue today. According to several employees who had been involved with safety over a long period of time or who had been employed in safety departments historically, in past years safety violations were commonplace and management did very little to address this issue:

I've been 30 years in the electrical department, we've come a long ways. There were some who would touch a wire to see if it was warm. Then there's my pet peeve, safety glasses. There was a woman, pipe fitter, working on a pneumatic buckeye grinder without safety guard. It has a ting blade, the blade broke and it flew out—it was going at [##] RPMs, it came right by here and split her nose (VP042 2008).

Most of those who had been involved with safety long-term held that it was a combination of OSHA regulations, increased authority delegated to safety department employees, and above all, increased emphasis and cooperation from employees in all portions of the yard which succeeded in affecting favorable transformations in safety policy on shipyards. However, safety was still an issue of concern for many workers, particularly in reference to certain yards which were infamous for poor safety (see Chapter 6).

Along with mentioning safety, or lack thereof, on various yards, workers also mentioned the various discomforts and hassles that were part of working in the shipyard. While generally not dangerous, such conditions affect workers' general views of working in a shipyard. Sometimes, such conditions were held to be ubiquitous to the shipyards as an industry, but others differentiated between yards, saying that for a number of reasons some yards were more conscientious of worker safety and comfort than others. Such perceptions among workers had important consequences for local yards. Some yards had developed unsavory reputations that were held by a number of individuals in the local workforce as common knowledge. Such yards were considered places to stay away from if at all possible and to remain for as short of a time as possible in the case that one actually ended up there. However, such yards also served as a source of training for a number of unskilled or low skilled new entrants into the industry. A common strategy among workers in the crafts was to acquire training at an unpopular yard that was generally less stringent with hiring requirements, and then leave to go work at a more desirable location.

4.3.5. Workforce Issues

Those in management on the yard floor held that drug use and absenteeism were two serious problems confronting the operation of shipyards and fabrication shops on the Gulf. Older workers also sometimes seconded this as marking a significant departure from the nature of the workforce when they had joined the industry in the 1960s or 70s. The increase in drug use and absenteeism was usually mentioned in conjunction with criticisms of the decline in work ethic and motivation of the younger generation. VP003, a long-term industry participant, spoke about the proliferation of drugs in the industry in more recent years and specifically referred to an experience he had had going in for a drug test for a prospective job:

I went to Louisiana one time, I didn't take the welding test the day before, then I had to drive back out the next morning and take the drug test. I walked in, two, three young guys laughing. The man said, "time's run out, you all got to pee into his cup." They said they didn't have to pee. I said "give me the damn cup, I just drove all the way from Alabama over here." They were probably on drugs just trying to put it off (VP003 2007).

Absenteeism was another widely acknowledged problem in the shipyards. Some associated this problem explicitly with the younger generation of workers, whereas others believed that it was something that affected all groups in the industry. VP034, a union representative at a large yard in Mississippi, expressed the latter opinion:

When someone gets discharged for missing work one time too many or breaking a rule. I have to attend the meeting and there's nothing I can do about it. This happens pretty regularly, a lot of people don't come in to ask for help... The company is understanding about valid reasons, but when you just miss they aren't. I ask them, they say "don't know". For some it's an alcohol problem, or family problem and they don't ask for help until it's too late... It's not just the young ones, it makes you sick. A friend worked there 30 years, was terminated (VP034 2008).

Thus, in VP034's opinion, the problems of drug abuse and absenteeism were connected with the high incidence of the former among shipyard employees leading to the latter.

4.4. ENGINEERING DEPARTMENT

On most large yards, engineers and others such as draftsmen and naval architects, who worked in engineering departments, constituted a middle ground between craftsmen engaged in physical operations on the yard and office workers, including HR and upper management. Engineering departments were often located in the midst of yard operations, necessarily as engineers had to keep pace with the work continuously ongoing in the production area. However, although engineering departments were generally in close proximity to yard floor operations, they were also typically shut away from these operations, usually by means of being located in an office trailer or building.

4.4.1. Training

Engineers were the recipients of four-year university degrees. In most cases, engineers had been recruited from outside of the yard or shop at which they currently worked. Additionally, engineers were often recruited on a nationwide level by human resources (HR) representatives. In rare cases, engineers started out in the crafts or in another position on the yard floor and then acquired their degree during the course of working for the yard. Other professionals on the yard such as naval architects also held college degrees

Employees who occupied positions such as draftsman or non-destructive testing were often recruited from outside of the yard but were sometimes trained on the yard as well. Some such employees had attained their training from technical programs or four-year universities. During fieldwork in 2007-2009, a growing number of shipyards either possessed or were considering

training programs that enabled their employees in the crafts to become certified in such disciplines.

4.4.2. Skill Acquisition and Advancement

In general, engineers in shipyards and fabrication shops on the Gulf Coast were not as stable a workforce as one might expect of supposedly “white collar” employees. Engineering skills were in high demand on the Gulf Coast leading, as mentioned before, to many large yards and shops recruiting nationwide and even internationally for qualified engineers. This being the case, during industry boom times, work opportunities were readily available for engineers, similar to the situation for skilled craftsmen, and many engineers, like craftsmen, moved readily from job to job for the highest wages. Nor was this an entirely new development. Some engineers who had historically worked in the shipbuilding and fabrication industry on the Gulf also related how either they or other engineers had switched jobs with considerable frequency for higher pay and better benefits. This tendency was not based solely on the engineers’ own inclination to travel from job to job but was also a result of the nature of the industry, with many large shipyards bringing on engineers for particular contracts.

However, as in the crafts, there were those in engineering and other white-collar jobs on the yard who were averse to leaving the local area to which they often had strong attachments. Furthermore, not all of those with a degree had had as easy of entrance into high wages in the local industry as some in Gulf Coast shipyards might have believed. For example, BM069, who worked as the leaderman of the computer numerically controlled (CNC) shop on a large yard in St. Mary Parish, had gone to university to attain a degree in computer engineering. However, after graduating, he came home to find a lack of jobs fitting his degree. Having to “feed my family” as he put it, he took a job as a welder with a large shipyard in the area, something that he had not planned on doing upon graduation. Eventually, BM069 had worked his way to his current position by being highly ecumenical in his approach to training and skill acquisition in the yards and picking up a variety of skills, such as computer-aided design, in his spare time. Thus, while the majority of people with higher degrees in engineering and other technology-related fields may find it fairly easy to obtain relatively high-paying jobs that fit their degrees, it should be noted that there are others whose experiences do not follow this particular narrative.

4.4.3. Job Perceptions and Experiences

Similar to older workers and supervisors on the yard, engineers and other on-the-yard professionals also voiced complaints about workforce acquisition and retention during fieldwork in 2007-2009. As mentioned above, this was not an entirely new development, but some engineers and other professionals nevertheless implied or openly stated that such problems could be largely attributed to a decline in work ethic among the younger generation in Gulf Coast communities. This attitude was not always limited to those who had spent a great many years in the industry. For example, SR037, an engineer at a large Louisiana shipyard who was only in his mid-30s, had the following to say concerning the scarcity of new engineering recruits for industry:

I’d like to hire another engineer but kids today—I hate to say kids today because that makes me sound old—they have no work ethic. They come out of college with these degrees and there are so many jobs for mechanical engineers around

here that they can just slack off or decide you're not paying enough or whatever and then find another job immediately (SR037 2008).

Again, it is worth noting the similarities that some perceived existed between employees in the crafts and employees with four-year university degrees. Engineers and employees such as draftsmen were in high demand in most shipyards and fabrication shops during 2007-2009 and could leave a position at one shipyard being relatively sure that they would find one at another one. BM068, a naval architect at a large yard in Louisiana, also complained about the lack of engineers and other professionals who were willing to join the industry. However, despite this perceived shortcomings of the job, BM068 regarded his position favorably due to its detail-oriented nature and the fact that it centered around taking a concept and giving it physical form.

4.5. HUMAN RESOURCES, ADMINISTRATION, AND UPPER LEVEL MANAGEMENT

On medium and large shipyards and fabrication shops in the Gulf, employees in HR and upper-level management positions were located in office buildings that were generally set some distance apart from the yard floor. In most cases, these office buildings were separate from the engineering department as well, but at times, these were housed in the same area of the yard. While these workers may not be those that come immediately to mind at the thought of shipbuilding and fabrication, some employees in these departments brought unique perspectives to organization and work in shipyards and fabrication shops and in some cases had considerable interaction with various groups of workers on the yard.

Unlike other departments and areas in the shipyards and fabrication shops, the human resources and administration departments were two areas where it was usually possible to find a majority of female employees. As noted above, women were not unknown in other sections of large shipyards and fabrication shops. However, they were certainly in scarce supply in these other areas when compared to male workers. In addition to performing tasks such as accounting, maintaining payroll, and recruiting new workers, employees in these human resources and administration departments were also sometimes expected to act as liaisons between yard floor workers and employees in other departments such as engineering, which gave them a different perspective on work in the industry.

In terms of gender diversity and presence, upper management at large shipyards and fabrication shops was unlike human resources and administration departments and similar to the other departments in the yards and shops. Outside of human resources, administration, and public relations, women were very rarely found in the ranks of upper management. Those in upper management had in some rare cases worked their way up from entry level positions on the yard floor, but more commonly they were holders of four-year university degrees, generally in engineering or business. While most in upper management did not spend time actively participating in the physical portions of production on the yard, most prided themselves with having some or extensive knowledge of workings on the yard or shop. A good portion of those in upper level management related to physical operations on the yard, for instance repair work, had experience working on actual production processes in the shipyards. Common concerns among those in upper management were workforce recruitment, material acquisition, client acquisition and maintenance, and government and public relations.

4.5.1. Training

Those employed in training departments generally possessed four-year college degrees, especially those who worked in administration or human resources. Many of them, like employees in the crafts and engineering, had entered the industry immediately after they had completed their schooling. However, a portion had also spent time in various other occupations, with several putting in considerable time in the military prior to entering into the industry. Those working in human resources and administration generally did not have any hands-on experience with the crafts and with the production processes on the yard, although, in some cases, they developed an understanding of these processes during their time on the job.

Those in upper management positions at the yards had sometimes entered the shipyards immediately after completing their formal education, but they had also commonly worked in different industries prior to coming to work in shipbuilding and fabrication. In some cases, in their earlier years they had had hands-on industrial experience, though not always in shipbuilding and fabrication. BM031, for example, was the vice president of the repair division at a large yard in Port Arthur who had extensive experience working in shipbuilding and fabrication in various parts of the country and who had even made an attempt at starting his own business at one point in time. As opposed to BM031, BM004, an HR manager, did not possess any hands-on experience. BM004 had made his living as a clinical psychologist who worked as a consultant for various businesses, including some in the shipbuilding and fabrication industry. Thus, although BM004 was head of government and public relations, he had only two and a half years of experience working directly for the shipbuilding and fabrication industry. As might be expected and as will be discussed, despite these two men both being in upper management in large yards, their understanding of operations on the yard and the workforce was significantly different in some regards. In general, those in upper management without extensive experience in the industry were in departments such as training or human resources, where their more general skill sets were more easily applicable. While employees in other areas of the yard generally required considerable experience in the industry to reach higher level positions, it was the case that, relatively speaking, a larger portion of those in upper management were relatively new entrants to the yards.

4.5.2. Job Experiences and Perceptions

Many employees in the training area, yard floor, and engineering departments had very little contact with clients and other non-yard workers during their time on the job. As might be expected, the experiences of those in human resources and administration, and upper management were quite a bit different in this regard. For many people in such positions, their days in the yard or shop revolved around communicating with a variety of people both on and off the yard. VP116, an upper level manager in marketing who had worked for several shipyards in Mississippi, discussed how he perceived his own role in the yards as that of a “mediator”, and someone whose job it was to thoroughly understand the client’s needs.

For some who were in administration and HR, the people that they were in contact with on the shipyards and the type of work done was held to be the main attraction of the job. While bookkeeping and other aspects of their jobs were often described as much the same anywhere, there was an additional excitement to working on the shipyard. Of course, other factors played into the decision to work in the yards:

The people are all very interesting, and my husband also works in shipbuilding (he is a project manager over at Orange shipbuilding), so that might have something to do with it. Books are books, but it's more interesting to run them here [in the shipyard] than at a printing shop (BM017 2008).

Employees in upper management, like some in yard floor management, viewed the labor force in the shipyards as one that was unique in some respects to the industry. One man in upper management at a shipyard in Orange, Texas, BM013, who had worked for the majority of his career in a local refinery, expressed a view on worker management in the shipyards with regards to safety that was borne out of his experiences in both the shipyard and refinery work environments.

The people in the shipyard are probably a bit harder to handle on that sort of thing, because losing the job is not that big of a deal to them, it's not enough of a threat. At the plants and refineries—people are long-term employees, they are scared to death of violating a safety rule, because they might lose their job (BM013 2008).

In BM013's opinion, worker management in the shipyards demanded more constant attention and enforcement since the transitory nature of a significant portion of the workforce resulted in less ongoing concern among this segment of workers to work in accordance with safety regulations. Furthermore, safety regulations were not the only aspect of work in the shipyards that BM013 held was affected by attributes of the workforce. He held that many shipyard workers were in general less willing to deal patiently with management on issues such as time off when they knew that they could quit and then either find a job at another shipyard or even at the same location when they desired to be employed again.

Many in the shipyards, particularly craftsmen and other workers on the yard floor, emphasized the importance of on-the-job training and experience in the shipyard and downplayed or even belittled formal academic education as far as its usefulness in the shipyards went. However, BM004, the head of government and public relations at a yard in Orange, expressed another opinion on the lack of formal education in the shipyards:

I really miss academics in the shipyards. The shipyards is one of the last places you can work without any college training—but most of the people who work in the yards don't have any degree or much advanced education. My son is one of the youngest project managers in [the company's] history, and not because of his degree directly, but his college training helped prepare him and train him and give him an edge in the long run to be ready to deal with the challenges of the job (BM004 2008).

BM004 was an employee who hailed from an educational background that was far different than the majority of workers in the shipyards in that he possessed his master's degree in psychology. In describing his son's success in the shipyards, BM004 ascribed a far different value to education in the industry than most workers on the yard floor. While this is one opinion, it does demonstrate the existence of some degree of divergence between higher-level

management and the workforce in terms of those skills and attributes that they feel bring success on the job.

Similar to employees in other section of the yard or shop, people in upper management also referred to factors such as the ongoing challenges and frequently changing conditions presented by work environment of the yards and shops as major reasons why they chose to stay in the industry. For some, being involved with and being able to witness the high technology present on the yard was another attraction of the job. BM004 was one such individual who, as mentioned above, was a relatively recent entrant to the industry:

At the plants, you are working on big round vessels, here you are actually building things—working out in the open, and it 'gets in your blood', and people love it, it's an amazing industry... coming to the shipyards has been a real education for me. I'm is fascinated by the 'big things', legs that are 250 feet long...(BM004 2008)

Obviously, large differences existed in physical conditions amongst the four different areas discussed so far in this section. The yard floor was in many ways a far distance from the corporate office atmosphere of many human resources and administration departments on the yards. However, employees also pointed out what they considered to be less palpable differences in mentalities and work culture amongst the departments. PP012 was an ex-employee of one of the large yards in Mississippi who humorously described her job as being “the person that everyone could gripe at”, and who discussed what she perceived as one such difference between the work culture of the administration and HR departments and the yard floor.

In 1997 no one knew how to use [computers]. Which might be why I did so well since I knew how to use computers well...Production took the longest to feel the impacts of computers because there were a lot of guys who had never seen computers. You don't teach them a lot of stuff at once but just the things that would make their life easy. It was always in engineering, scheduling, and estimating. [Workers on the yard floor] don't use much in the way of computers but they use it to do certain things (PP012 2008).

In PP012's opinion, the work culture on the yard floor was in some ways less open to technological innovation and change, with floor worker having to be thoroughly convinced of the need and value of doing things in a way other than how they had always done them. In this account, there is also the notion of a transfer of knowledge from the engineering, administration, and upper management departments to the yard floor in terms of imbuing workers with little bits of knowledge that “would make their life easy.”

In much of their other commentary on the workforce, upper management and those in human resources and administration mirrored higher ups and long term workers on the yard floor itself. For instance, upper level managers and those in human resources both commented on the difficulty of workforce acquisition and retention.

In terms of perceived changes in the industry, some in upper management in the yards and shops voiced the opinion that while conditions for workers remained dangerous, significant progress had been made in areas such as safety and environmental control. VP082 worked as director of environmental affairs at a large yard in Mississippi and spoke at some length on what

he saw as the changes that had occurred during his time in the industry and the types of measures that had been required to achieve them:

But this is part of the culture change in business. You follow the money to know what interests you, it leads to the checkbook. We pour resources into EH and S [environment, health, and safety]. We have training giveaways, shirts, watches, gift cards, this is all positive reinforcement. The stick is still there, because some don't respond to positive reinforcement. If they did, we could close all the prisons... The OSHA rate is on the sign, we have a safety performance scoreboard with all the crafts on it. Environment, it's the same thing. We're beginning to weave in green tech... (VP082 2008).

In VP082's description, as in that related by many upper-level management personnel, the yards had witnessed a substantial change in work culture in recent years, with yard floor workers and upper-level management coming together to cooperatively function in a way that they had not in past years. This was held to be a departure from the management strategies utilized in the yards and shops in the 70s and 80s, which largely involved authoritarian top-down management. According to many in upper management then, the shipyards were in the midst of making a transition similar to that made by the majority of other U.S. "blue-collar" industries throughout the late 1980s and 1990s and into the new millennium (Osterman 2006). This transition involved the active cultivation of a team mentality on the part of management and the opening of communication between yard floor workers and various levels of management.

Additionally, in many yards and shops, newer approaches to work management again mirrored developments in other industries in the United States by increasingly promoting notions of career paths and self-improvement among the general workforce. Respect for the multi-skilled nature of many members of the older generation of shipyard workers was something that was commented upon favorably by those in all of the various areas of the shipyards. Since the 1980s, the workforce was held by some to have undergone considerable "de-skilling" as the result of changes in the local community and the adoption of modular construction by shipyards and fabrication shops on the Gulf Coast. Free company training programs were held to be one important way through which the shipyards could create a multi-skilled workforce. Many in management detailed elaborate training schemes and plans that were either already in progress or going to be put into motion at some point in the near future in their particular yard or shop. This too was held to be part of a new business ethic that emphasized closer relations between yard floor employees and upper management as voiced by PP029, who worked in human resources at a large Mississippi yard.

We just have a philosophy called "Grow your Own". We want to offer the workers new ways that they can better themselves and make more money and the computer systems and training is one of these ways. Basically we're a large company that runs like a small company (PP029 2008).

Unlike managers on the yard floor, employees in human resources and administration, and upper level management were not simply focused on improving communication between management and workers but in many cases, also between the yard and the local community. In some cases, this was held to at least partially require the same types of strategies that

improvement of worker-management relations on the yard did. For example, in a move that was somewhat analogous to the cultivation of new forms of “involvement” on the yard such as the addition of safety scoreboards, some medium and large yards had begun to try to improve their image in the local communities through events such as company barbeques.

As mentioned earlier, union presence was very rare in Gulf Coast shipyards and fabrication shops and thus, not something that upper-level management had to actively contend with. However, according to a number of those in areas of the Gulf where at least one unionized yard was present, while most individual yards and shops were not unionized, those yards that were unionized generally set the bar for other yards and shops in terms of wages and benefits. Thus, one argument that upper-level management used in dissuading yard floor workers from unionizing was to point out that they already possessed the benefits of a union, thanks to the presence of unions at local yards, without paying the dues for unions.

4.6. DISCUSSION

This chapter has attempted to provide an overview of various areas and types of work available in medium and large shipyards and fabrication shops on the Gulf Coast, as well as provide some insight into the actual experiences and perceptions of some of the employees occupying these various positions in the industry.

Judging by the accounts of employees on the yard floor and training area, the relatively high wages offered by the shipyards are still among the major, if not *the* major attraction for local workers holding a range of positions in the yard. Some workers, especially those nearing retirement or already retired, expressed contentment at the life that working in the industry had allowed them to provide for themselves and their families but regretted other aspects of the job such as the toll it often took on the health of long-term workers. Other reasons that yard floor workers continued to work in the industry included a love for a particular craft, the constantly changing work environment, and the satisfaction of being part of the construction of an enormous, technologically sophisticated vessel from start to finish. These reasons for working in the industry were not just cited by yard floor workers but by a range of workers spanning all four of the areas that have been covered in this section.

Safety on the yard and the impact of the industry on one’s health were two areas that concerned many yard floor workers. While many of those in upper management and human resources pointed to high safety ratings and other indicators to argue that safety in the industry was indeed on the rise, some workers believed that safety was still an ongoing concern and that, given the health risks of yard work, one would do well to try and get themselves promoted to off the yard management. The topic of promotion was another issue that drew some disparate opinions, both from within and between the groups covered here. Employees in upper management and human resources were keen to promote a fresh perspective of the industry and the possibilities that it offered for enterprising workers. The notion of career paths and “self-improvement” had come to the fore in many large yards and shops in the Gulf during 2007-2009. Some workers had in fact ascribed to this ethic and reported having made substantial progress in their career. However, others argued that promotion in the yards was not simply about obtaining additional training and remaining at one company for an extended period of time. Instead, these employees held that promotion often hinged on family connections or other social networks rather than talent and hard work. Additionally, some workers offered a competing narrative to the picture that those in upper management and human resources painted of cooperation and communication amongst different sections and groups within the shipyard. Still, in many cases,

the shipyards still offer the best chance for local people lacking higher education to make a good living.

4.7. REFERENCES

- BM004. 2008. Personal communication. Experiences as worker in shipbuilding and fabrication industry. Discussion with Ben McMahan. Shipyard Public Relations. Orange, TX. March 12.
- BM013. 2008. Personal communication. View on worker management in shipyards with regards to safety. Discussion with Ben McMahan. Shipyard Manager. Orange, TX. April 15.
- BM017. 2008. Personal communication. Describing bookkeeping for a shipyard. Discussion with Ben McMahan. Former bookkeeper. Port Arthur, TX. April 18.
- BM031. 2008. Personal communication. Work in shipbuilding and fabrication in various parts of the country. Discussion with Ben McMahan. Shipyard Vice President. Port Arthur, TX. April 30.
- BM068. 2008. Personal communication. Lack of engineers and other professionals in the industry. Discussion with Ben McMahan. Naval architect/engineer, Shipyard. Morgan City, LA. June 12.
- BM069. 2008. Personal communication. Finding employment. Discussion with Ben McMahan. Leader man, Shipyard. Morgan City, LA. June 12.
- Osterman, Paul. 2006. The Wage Effects of High Performance Work Organization in Manufacturing. *Industrial and Labor Relations Review* 59(2):187-204.
- PP012. 2008. Personal communication. Experiences in labor management, training, and working in the shipbuilding and fabrication industry. Discussion with Preetam Prakash. Retired human resources shipyard worker. Jackson County, MS. June 26.
- PP029. 2008. Personal communication. Providing incentives to workers. Discussion with Preetam Prakash. Shipyard Human Resources. Moss Point, MS. July 8.
- PP036. 2008. Personal communication. Experience as trainee, worker, and management in shipbuilding and fabrication industry. Discussion with Preetam Prakash. Instructor, Training center. Mobile, AL July 29.
- PP058. 2008. Personal communications. Why people want to get out of the shipyards. Discussion with Preetam Prakash. Shipyard Instructor. Mobile, AL. July 23.
- PP059. 2008. Personal communication. Chasing money. Discussion with Preetam Prakash. Welding Instructor. Mobile, AL. July 23.
- PP067. 2008. Personal communication. How and where to sign up for classes. Discussion with Preetam Prakash. Quality Assurance Manager, Shipyard. Pascagoula, MS. July 24.

- PP089. 2008. Personal communication. Labor movements in and out of Gulf Coast yards and personal experiences as worker and trainee in regional shipbuilding industry. Discussion with Preetam Prakash. Shipyard employee. Moss Point, MS. July 29.
- PP091. 2008. Personal communication. Occupational history. Discussion with Preetam Prakash. Welder. Moss Point, MS. July 29.
- PP134. 2008. Personal communication. Finding a job. Discussion with Preetam Prakash. Welding Student. Mobile, AL. July 15.
- SR021. 2008. Personal communication. Adapting to different jobs. Discussion with Sarah Raskin. Foreman/welder. Larose, LA. July 9.
- SR023. 2008. Personal communication. Moving out of shrimping. Discussion with Sarah Raskin. Tacker/welder. Larose, LA. July 9.
- SR037. 2008. Personal communication. Workers today have no work ethic. Discussion with Sarah Raskin. Boat Engineer. Houma, LA. August 6.
- VP003. 2007. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Union representative at a large yard. Bayou La Batre, AL. June 18.
- VP013. 2007. Personal communication. Experiences as worker and owners in shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Shipyard manager. Grand Bay, AL. July 8.
- VP033. 2008. Personal communication. Positive and negative aspects of the transition to a new owner. Discussion with Victoria Phaneuf. Shipyard electrician. Pascagoula, MS. February 25.
- VP034. 2008. Personal communication. Labor unions. Discussion with Victoria Phaneuf. Union. Pascagoula, MS. February 25.
- VP039. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Shipyard employee. Pascagoula, MS. March 1.
- VP042. 2008. Personal communication. Safety on the job. Discussion with Victoria Phaneuf. Electrical work. Pascagoula, MS. March 6.
- VP082. 2008. Personal communication. Changes that had occurred during their time in the industry. Discussion with Victoria Phaneuf. Supervisor. Pascagoula, MS. May 30.
- VP091b. 2008. Personal communication. Welding working conditions. Discussion with Preetam Prakash. Training instructor. Moss Point, MS. July 24.

- VP098. 2008. Personal communication. Shipyard training programs and experiences working in the shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Instructor. Pascagoula, MS. June 12.
- VP110. 2007. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Welder. Bayou la Batre, AL. June 14.
- VP116. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Shipyard worker. Gautier, MS. August 5.

5. ECONOMIC, COMMUNITY, AND WORKFORCE DEVELOPMENT

5.1. INTRODUCTION

Within each community, the shipbuilding and fabrication industry exists alongside other industries and may be in competition with other livelihood opportunities. It dominates local economies in some places and is hardly visible in others. The industry came to be located where it is because of historical environmental, economic, and sociopolitical factors as well as more recent events and decisions (see Vol. II). While access to water and the presence of suitable land are both critical factors in determining where fabrication and shipyards are located, not every available dock, port facility, or industrial property is dedicated to this industry. At the same time, although government contracts and large and powerful international corporations drive many of the decisions that affect the nature and extent of this industry in the Gulf of Mexico, local, regional, and national entities also play a role in the sorts of businesses and industries that locate, and remain, within the region. This chapter explores the economic, social, and political factors that affect Gulf Coast communities and the industries there. It focuses on economic, community, and workforce development from a top-down perspective, exploring efforts to shape the economic base of a community through policies and programs.

This chapter thus seeks to place shipbuilding and fabrication in a broader context of community development, one that examines central tensions between economic development policies that aim to cut production costs to business through tax incentives, public investment in infrastructure and workforce development, and those that aim to build up the capacity of the community. Shipbuilding and fabrication, as important industrial sectors in many of the study communities, influence how these tensions play out.

The chapter begins by defining three different types of intentional development, noting particularly how they interrelate with one another. This is followed by an overview of state and local development agendas and plans within the study area. Due to the fluctuations in the fabrication and shipbuilding industry described in Volume I, over the years Gulf Coast communities have put in place various strategies for reducing as well as increasing local reliance on the industry. A brief examination of attempts to diversify local economies highlights the important role of place marketing and the difficulties of diversifying away from an existing industrial base. Two case studies derived from material gathered on study communities in Louisiana and Mississippi help to illustrate these issues. The chapter closes with some general points for discussion.

Data utilized in this chapter are derived mostly from discussions with community leaders and economic development officials during the initial phases of this study (January 2007 to August 2007), and from state and local organization websites (that were current during the study period). This information has been supplemented with relevant information from discussions with community members that occurred during the remaining field sessions and from newspaper articles. The discussion of state and local policies and academic literature review are not intended to be comprehensive but are included to provide the reader with a context for understanding the economic, community, and workforce development efforts occurring in the region during the study period.

5.2. DEFINITIONS AND DEBATES

Definitions for economic development vary, though they generally stress the investment of new capital in a local economy. The influx of capital is assumed to grow or maintain jobs, increase or support the income of local residents, and expand the tax base (Eisinger 1988; Perryman 2006; Rio Grande Empowerment Zone n.d.). Some definitions also emphasize more processual aspects involving public entities, such as planning and business assistance, and workforce development (Alabama Association for Regional Councils 2002; U.S. Government Accountability Office 2006).

Community development is often described in more abstract terms. In describing community development, some focus on capacity-building through local cooperation and empowerment so that communities are able to act according to their own values and priorities (Eade 1997; Rio Grande Valley Empowerment Zone n.d.; Smith 2006[1996]). Other definitions are more descriptive, identifying development in particular programmatic areas, such as housing, education, and infrastructure (Alabama Association for Regional Councils 2002; U.S. Government Accountability Office 2006). Community development work in the U.S. has increasingly been channeled into private organizations. Many of the community-based organizations in the study areas take up issues that intersect with economic development concerns. They include cleaning up and repairing existing housing, and helping people find safe, adequate housing. Some projects also focus on helping to open up opportunities to populations outside the economic mainstream by helping individuals obtain basic skills, such as through improving literacy. Groups also help to raise and obtain private and public funds for community centers and other public use facilities.

Workforce development involves both workforce education (or career and technical education) and non-training and non-educational processes related to the workforce. These include social skills such as networking and leadership experience. Workforce development is also heavily influenced by government policies and programs; the needs, desires, and demands of the private sector; and the history, culture, and goals of particular social contexts (Jacobs 2002). In general, both public and private efforts have resulted in training programs that range from schools that provide adult education courses, to labor unions that operate dislocated worker training and apprenticeship programs, to organizations that offer employees career development opportunities (Jacobs 2002). At the local level, workforce training programs make use of a wide array of public and private funds. Some are tied to federal and state workforce agendas and programs, while others respond more directly to individual business concerns though may still leverage public resources. Programs are housed in high schools, specialized industrial training centers, community colleges, vocational schools, and within private sector facilities. Participants in the programs also vary, from high school students in vocational education, to young apprentices, to incumbent workers with considerable work experience. The length of training varies from two weeks for a basic introductory orientation, to four to five years for the most extensive union training. The programs also range in cost and prestige, as some are highly sought-after and provided free to candidates, who are even paid for their time while interning in a local shipyard, while others have tuition and fee requirements.

These three forms of intentional development are integrally related. The National Association of Community Development Professionals (2005) suggests a “layer cake model” for understanding how they articulate (see Figure 5.1). In this model, the top two layers are the economic base (e.g., industry, tourism) and physical infrastructure (e.g., roads, utilities, natural resources). These comprise the scope of industrial development. The third layer is support

infrastructure or quality of life (e.g., health care, insurance, education systems, retail). The top three layers are the scope for economic development. The fourth and final layer is human infrastructure (e.g., work ethic, family structure, community spirit, knowledge and skills). In this model, community development is conceptualized as encompassing all four layers, thus making it broader than either economic development or workforce development (National Association of Community Development Professionals 2005). The enfolding of workforce development and physical infrastructure within economic development is common in frameworks that are implicit in economic development policies and programs. However, other models and programs also imply that community development, like workforce development, is a means for realizing economic development.

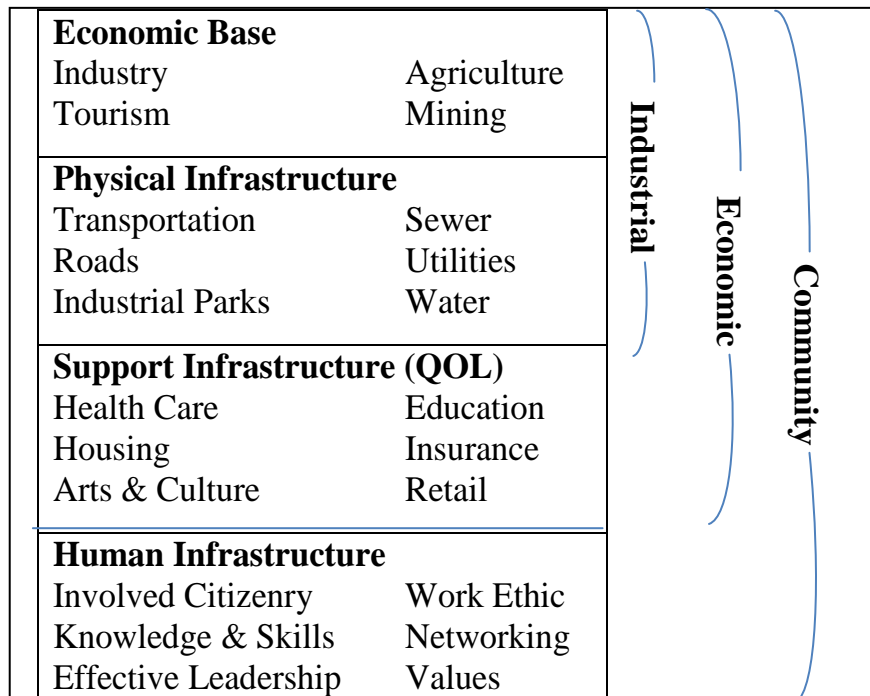


Figure 5.1. Layer cake model for development (adapted from National Association of Community Development Professionals 2005)

While community development is often difficult to distinguish from economic development, it is notable that in the past, the dominant view was that the “archaic” structures of community hindered development by causing inefficiencies (Storper 2005). Here “community” was understood to be a group of people governed by inflexible rules and order that stymied innovation. By contrast, others view community as providing the necessary underpinnings for the market (e.g., valuable assets that can be utilized), arguing that “community,” and the focus on community development, actually promotes economic development (Porter 1990 as cited in Waits 2000; Storper 2005). As such, public investment in community and workforce projects (e.g., housing development, upgrades in infrastructure, training programs) and the promotion of “human infrastructure” improvements can be tools in strategies for economic development. Such projects can be used to support workers of existing businesses in an attempt to help industries

flourish and to maintain industries within the community. Community improvements may also be used as a means of attracting new businesses and workers to the community.

Economic development policies that support such investments have been called “high-road” policies, and tend to focus on promoting industrial growth involving new, skill-based jobs. By contrast, “low-road” policies aim to create cost-cutting measures, such as tax abatements, in an attempt to attract and maintain cost-sensitive, low-wage, low-skill industrial sectors (Brenner 2002). These two approaches to policy are used to varying degrees in tandem with one another, though community leaders must decide to which side they will devote the most resources and focus. Thus tension exists between strategies to lower production costs and those designed to build up the community, as well as between those to focus on immediate economic benefits or long-term sustainability. Similarly, policy makers have to contend with the tenuous prospect of promoting growth that does not outstrip the community’s available resources, and consequently cause problems for its existing industry (e.g., strain the labor force and raise wages).

The economic development policies that are adopted depend on the different strategies taken up at the local, regional, and state levels. Economic development strategies respond to, and may be constrained by, a host of issues, including local exigencies like natural disasters, existing infrastructure, workforce characteristics, and existing natural resources. They also have to respond to industry cycles, upstream policies, and developments occurring in the geographic proximity. The particular economic development strategies that locations adopt are also in part tied to how communities are imagined. Place identity enters into conversations about the direction of development and helps to determine development projects. A sense of place serves as an important tool in how communities market themselves to outsiders and position themselves to capture private and public funds. Place identity is also important in community members’ sense of meaning and cohesiveness. However, the extent to which community members share visions of their community or support the strategies that economic development leaders adopt varies. In some instances, community members do not have access to much information about local economic development policies and little ability to influence the course of economic development (e.g., some local economic development boards only allow officials from the private sector on the board). In general, it is a small group of people, some elected but most appointed or hired, some from the local area but many from outside with their own economic and investment goals, who determine local, regional, and state economic development visions and practices. However, despite concerted attempts on the part of development directors and other development agents (e.g., economic development boards) to shape the community in specific ways through these development projects, images of place are dynamic, disparate, emergent, and not necessarily coherent, and directed development efforts are confounded by exigent factors.

5.3. STATE AND LOCAL DEVELOPMENT

Development programs at the state and local level are influenced by national-level policies in part because state and local programs often depend on funding from the federal government. Multiple levels and scales of linked policies bring public, private, and civil society actors and institutions together for different development purposes. These relationships are dynamic and the goals of the different actors and institutions are not necessarily aligned or pursued for the same purposes. Although the fabrication and shipbuilding sector responds to international petroleum industry dynamics, its effects at the community level are also influenced by state and local policies and programs.

5.3.1. State Plans and Programs

The development strategies that states adopt are realized through state and local offices and organizations (see Table 5.1). Each of the four states in the study area has primary state economic development offices or agencies that help to coordinate economic development (e.g., incentive programs), disburse economic development funds to local entities, and generally promote their states to industry. Most of the states divide their economic development programs into those aimed at attracting new business to the state, helping to expand or maintain existing business, and supporting small business. States also have state community development agencies. Many of these administer their states’ federal block grant programs. For example, state level agencies like the Texas Department of Rural Affairs are provided community development block grants (CDBGs) from the United States Department of Housing and Urban Development (HUD). Non-entitlement cities (i.e., cities with populations less than 50,000) and counties with non-metropolitan populations of less than 200,000 apply to these state agencies for CDBG funds. Entitlement communities are able to apply directly to HUD for CDBGs.

Table 5.1.

States’ Primary Economic, Community, and Workforce Development Entities

	Economic Development	Community Development	Workforce Development
Alabama	Alabama Development Office	Alabama Department of Economic and Community Affairs	Alabama Office of Workforce Development
Mississippi	Mississippi Development Authority	Mississippi Development Authority	Mississippi Workforce Investment Board
Louisiana	Louisiana Economic Development	Office of Community Development	Louisiana Workforce Commission
Texas	Division of Economic Development and Tourism	Texas Department of Housing and Community Affairs	Texas Workforce Investment Council

State goals for economic development are diverse. For example, during the study period, Alabama identified eight state economic development goals. They included enhancing the state’s “branding,” targeting specific growth and business sectors, increasing export sales, and encouraging job growth in non-established, non-traditional regions of the state (Johnson and Alford 2007). As written, these goals are consistent with the state’s emphasis on supporting and growing three higher-technology industry sectors (automotive, aviation/aerospace, and life sciences and biotechnology) and two regional sectors (biomedical in Huntsville and Birmingham and shipbuilding in Mobile) (Alabama Development Office n.d.). While Alabama’s economic development goals follow traditional conceptualizations of economic development, Louisiana’s goals are distinctive for their breadth. The state’s economic development program, Vision 2020, has three goals: to establish the state as a “learning enterprise” (e.g., high value on and pursuit of education by every business, institution, and citizen; responsibility for lifelong learning), to develop a “culture of innovation” (i.e., thriving economy based on innovative, entrepreneurial, and globally competitive companies that maximize available resources), and to make Louisiana into a “top ten” state (i.e., enhance the standard of living) (Louisiana Economic Development Council 1999). These goals are reflective of viewing what are often thought of as components of community development, such as education and quality of life, as foundations for economic development.

5.3.2. Organization

With enhanced competition for public resources, theorists and practitioners have supported the formation of public-private partnerships and other cooperative groups that can leverage resources. These cooperative arrangements have a tendency to be decentralized and flexible (Brenner 2002), as well as of short duration (Hall and Hubbard 1996). Relationships are not necessarily consolidated and may be more strategic in nature as communities and private organizations attempt to meet their goals within the strictures of funders' requirements, as well as manage and disperse the responsibilities that come with federal devolution that intensified during the 1980s.¹

There are multiple stakeholders in state and local development. They include political chief executives, governors, and mayors who help articulate development goals, create coalitions to develop and enact policy initiatives, and promote their states and its private sectors. There are also development professionals who act in both the public and private sphere to invent, promote, and implement economic development policy (Eisinger 1988). Additionally, industry groups function on multiple scales (national, state, local) to lobby in the interest of existing business and promote their states.

All of the study areas have regional development organizations. Regional bodies are required for receipt of certain federal funds and serve as sites of disbursement. They can also benefit communities in other ways. For example, the South Louisiana Economic Council (SLEC 2008) identifies six reasons for the importance of regional partnerships in development:

- It provides the community with two things critical in a global economy: an identity and numbers
- Because workers commute within the region, it is important that they work together to support the workforce
- There is competitive advantage in pooling resources
- It allows for a more efficient use of resources, and a leveraging of state and federal resources
- It strengthens local programs
- There is anecdotal evidence of slowed performance in places where there is a weak regional approach

Regional development is not without conflict, though. Historical relationships among communities that might include competition for local resources, land, and prestige, not to mention differing personalities and goals of the leaders involved, can result in tenuous regional partnerships. Within this setting, attempts to bring communities together for planning purposes

¹The federal government supports these sorts of multi-organizational approaches to economic development. For example, any area, region, or community that wishes to qualify for federal Economic Development Administration (EDA) assistance must develop a comprehensive economic development strategy (CEDS). CEDS result from continuous economic development planning, theoretically, between an array of community actors. This focus facilitates the formation of public-private partnerships. It also necessitates systematic surveying of community assets in order to build upon local strengths to maximize economic opportunities and continual evaluation to ensure that performance is in line with locally-defined benchmarks (U.S. Department of Commerce n.d.).

can sometimes lead to the more powerful communities dominating discussions. Such tensions can lead to splits in cooperating organizations, as evidenced in the case studies below.

Federal funds for community development and workforce development often come to local and regional bodies through the state, though in some cases money is directly transferred from the federal government to local agents (e.g., Economic Development Administration revolving loan funds). As noted above, since the 1970s, block grants have become an increasingly popular way to package federal funds for programs. Such pockets of money appear to give state and local leaders more discretion over how funds are used and facilitate addressing particular local issues. However, block grants, along with unfunded mandates, are indicative of the movement toward giving states and localities more responsibilities with less federal funding (Brenner 2002).

State and regional agencies provide a number of services to communities and businesses to assist them in their development goals. “Asset mapping” is one service that many state regional planning agencies provide local communities within the arena of community development. The Mississippi Development Authority (MDA), which is the state’s lead economic and community development organization, has an “Asset Development Program.” Here “assets” are defined as “non-traditional economic development opportunities unique to Mississippi” such as “cultural heritage, hospitality, unspoiled waterways, forests, natural resources, infrastructure, and recreational choices” (MDA 2009a). Leaders argue that “by identifying, improving and promoting their assets, communities can improve their quality of life, increase their competitiveness and increase tax revenues” (MDA 2009b).

While this approach gives a nod to improving the lives of the citizens already within the community, it places emphasis on developing a local identity for the consumption of non-community members (e.g., potential workers, tourists), and diversifying the local economy through development of a tourist industry. Such approaches identify qualities and resources within a community for repackaging and use in marketing localities to business and consumers. Thus, community development here is an integral aspect of a place’s economic development strategy.² At the same time, questions arise as to who or what should be driving development (whether community, workforce, or economic) goals. Should development primarily address the needs of industry and business, or should it be responsive to something else? When communities are heavily anchored by one or two industries, the specialization of the local economy makes the community much more dependent on the success of the industries, and the voices of those who would raise these questions may be muted. As seen in Volume II, the eight study communities represent varying levels of dependence on the fabrication and shipbuilding industry and also diversity in the extent to which that industry drives local development efforts.

5.3.3. Strategies

Across the United States, economic development policies have changed over time, and different regions have employed slightly different strategies under different conditions. In some cases, such as attempts to lure industries away from other states that began in earnest in the 1930s, southern states have led the way in strategy innovation (cf. Cobb 1993). The tools that states use to attract companies and investment have diversified over time, especially in the 1960s, when monies became available through federal legislation like the Appalachian Regional

² The focus on locally-specific factors is also part of a policy trend that gives localities more discretion, and responsibility, over how government funding is used and local issues are resolved.

Development and the Public Works and Economic Development Acts. States increasingly offered loans and loan guarantees for building and equipment purchases, chartered development credit corporations, and issued a variety of revenue bonds. Just as tax policies at the federal level have gained favor as a means of redistributing funds to support individuals and businesses, states have also used taxes (e.g., abatements, job creation tax credits), created infrastructure (e.g., industrial parks), and established their own enterprise zone programs to help lower production costs and attract and maintain business (Leicht and Jenkins 1994). Though much of the initial shipbuilding infrastructure was established by federal war-related efforts, even then state and local governments competed to have yards and facilities located within their borders. As the private sector, specifically the oil and gas industry, grew to dominate gulf fabrication and vessel construction, communities utilized a variety of means to attract and maintain companies and yards.

Professionals working in private economic development corporations play varied roles, to varied degrees of effectiveness, in local and regional development. Some act as mediators for federal and state monies, while others are more actively involved in seeking funding opportunities and interfacing with businesses. Economic developers bring particular theories about and strategies for development, sometimes adapting those to fit the conditions of the communities in which they work. Most of the economic developers with whom researchers interacted during the study period highlighted their roles in supporting and growing business. For example, one director stated: "I'm an economic developer, I'm a smokestack chaser. We always try to bring in big industry" (SD02 2007). For the majority, the focus of their efforts was on how to grow the local economy in the short term rather than on long-term sustainability. The tension between strategies that focus energies and resources on supporting old and new exists on many levels: from housing, to workers, to ideas. For example, in places that focused on bringing in new ideas, people, and business, what existed within a community was discussed as posing a drag on plans for modernization and hindering development. By contrast, other localities affected strategies to bolster and maintain existing businesses and working arrangements. As appropriate based on the varied histories of the eight study communities and the breadth and depth of their relationships to the fabrication and shipbuilding industry, the extent to which each community focused on old and new varied across the region. Those tensions between old and new, and how they play out in local approaches to development, are explored in the case studies below.

Economic development strategies are also shaped by narratives of place, local conditions, and existing relationships between communities and industries. Narratives of place often serve to create breaks with the past or create linkages, depending on whether strategies involve shifts or maintenance in local development. The official discourse about communities such as Mobile, and to a lesser extent Jackson County, Mississippi, and Coastal Bend, Texas, highlighted breaks with the state's past and with the surrounding South. For example, a university professor in Alabama stated that the "days of George Wallace" were over and that even though people may talk like "southern rednecks", they supported "economic development," which was primarily described as the process of attracting companies to the area through economic incentives (SA01 2007). This statement creates a historical bridge between political power, racism, and underdevelopment. During the New Deal, FDR's administration had considered poverty and labor intensive production processes (both community and economic development issues) as barriers to development in the South. Also throughout the century, southern leaders had been loath to accept federal dollars for community and economic development programs with requirements, like desegregation, that posed risks to their political power. This individual went

on to make forward-looking comments that highlighted the international origins, world-class nature, and technological sophistication of most of the major companies newly locating in the community. This future-oriented narrative, which was echoed by other community officials, positioned the city as a distinct and modern cosmopolitan center and thus much different from the South of the popular imagination. The repositioning of the South in this way (a distancing from a racist past, a uniting with a global future) has been occurring over the course of the last 50 years, as southern states and communities have helped to build up the “Sun Belt” place identity.

By contrast, observers of the economic boom in the Golden Triangle of Texas drew parallels to the region’s history. Port Arthur was described as undergoing a “second Spindletop” (SD01 2007) or a “little Spindletop” (SD08 2007). This draws on social memory and indexes a specific period of time that many associate with flourishing. By linking this new growth to that narrative, contemporary economic development gains meaning and also a framework for understanding outside the most recent historical experience of economic depression after the collapse of oil prices.

Economic development strategies also respond to local exigencies, such as the loss of and growth in industry (which are often tied to broader economic processes) and hurricanes, which can force or provide opportunities for localities to rethink and re-envision development patterns. The relationships that local industries have with the community also affect development. In places where fabricators and shipbuilders had been intertwined with the community for many years and where industry leaders had strong political connections, fabrication and shipbuilding representatives play key roles in economic development boards, councils, and other influential bodies. Positions in such strategic organizations give industry leaders occasions to promote policies, attract monies, and create opportunities that support their interests. In addition to political and social clout, the industry affects local development in other ways despite professional development agendas. For example, shipbuilders’ presence on the physical landscape of the community can limit viable options for diversifying the local economy. Its presence also generates and supports the maintenance of a workforce with a particular type of skill set and education and training history. Large shipyards can significantly alter the landscape and local ecology, and the land on which they sit may require considerable investment in order to be prepared for some other use. At the same time, smaller yards can contribute to the character of a place.

The development of shipbuilding along waterways might preclude high-end residential and tourist development in those same areas. However, in some communities, the potential conflict of simultaneously promoting tourism and heavy manufacturing was not openly discussed by study participants. As discussed in the Morgan City, Louisiana, community profile, it is possible for some types of leisure and recreation to coexist with industrial build-up. In Coastal Bend, too, a local fabricator helped sponsor a local festival and organizers noted that the tall cranes in the area shipbuilding yards drew people from “all over” (SE10 2007). In each of the eight study areas, at least a portion of the region has an established or plans for establishing a more consumption-based economy that draws on its ecological resources. In Morgan City, school children and tourists alike visit the Mr. Charlie Rig and Museum. In Port Isabel, tourists were said to be taken on boat rides out to view industrial operations (SF14 2008). The potential for doing something like this was raised elsewhere in Texas through the argument that many people do not have much contact with industrial operations anymore and might be interested in seeing them.

In recent decades, states have started emphasizing developing industry clusters and complexes rather than individual firms (Bradshaw and Blakey 1999). Industry clusters or regional industries, rather than single businesses or industries, are believed to be the source of most jobs and export growth (Waits 2000). Industry clusters often have three layers: core industry; agents who provide support such as through investment capital, supplies, and other special services; and basic economic components including essential infrastructure, research and development capability, and specialized workforce training (Waits 2000).³ Identification of clusters is grounded in the idea that understanding and promoting those economic sectors best suited for a certain location will enable those sectors to be as competitive as possible and thus have positive economic impacts for the communities in which they are located (Waits 2000).

Communities in the study area generally have identified particular industries deemed well-suited to their unique resources. A director of a workforce center in Texas described changes in his county in the recent decade and how this tied in with globalization and changes occurring in other regions of the country:

In the last four years we [workforce developers] have had a re-emphasis on trying to take a big picture of the economy of Cameron County. We feel we can speak with some base of knowledge of the impact of these industries on our community. We took it upon ourselves to engage in an industry cluster study. We identified eight or nine but decided to focus on the top five. Of those, the top three are tourism, healthcare, and manufacturing Two clusters are new and emerging—logistics and plastics... There is growing business and a need in the business community for access to information; as fast and accurately as you can get it is critical. With NAFTA [North America Free Trade Agreement] and CAFTA [Central America Free Trade Agreement] and the advent of those strategies—as bad as they were as they seemed to have a negative impact on the economies of the rust belt—there are so many companies now along the border. To their detriment and our benefit. The whole border region and particularly the Rio Grande Valley and Cameron County have benefited. We have many Fortune 500 companies that have come to the border region. We have received the positive benefits of those changes. South Texas used to be primarily an agricultural economy. We have had a transition to a more diversified economy. The changes have been radical. One has begotten the other as folks came down and discovered us. Folks came down to work or because of the weather and then spread the word. (SC17 2007).

Shipbuilding is recognized either explicitly or indirectly (under the heading of manufacturing) as a key industry, an industry target, or as part of an industry cluster in all of the

³ Industries that cluster together over time develop relationships with suppliers, customers, and workforces that create reciprocal ties between firms and place. As argued by Rosenfeld (1997), given certain variables are in place, these specialized relationships can be synergistic, with positive economic impacts. However, he notes there is a danger of overspecialization if a cluster does not identify and appropriately respond to economic or technological changes that make the cluster vulnerable. Moreover, specialization and diversification can co-exist, which is evident in state and regional plans to develop multiple industry clusters. These relationships can steer development in directions not intended by formal economic development planning.

study areas' regions. However, as noted in the community profiles, while many of the eight study areas were experiencing growth in different industry sectors during the field period, there was variability in terms of their degree of economic diversification overall. In general, there was little discussion among those involved in economic development of how they would deal with downturns or slowdowns in any one of these growth areas, even though all had previously experienced those cycles. While many were investing in infrastructure and training programs to support key industries, such as shipbuilding, contingency plans for how those structures and workers could be flexibly adapted in changing economic conditions were rarely noted. Diversifying the economic base through the development of several industry clusters was discussed as one way to ride out business cycles in any one area. A few voiced concerns over the infrastructure development put in place to support what were known to be temporary projects, such as the establishment of hotels to house refinery turnaround and expansion workers. However, most of the development professionals and community leaders spoken to portrayed industry cycles as normative processes with which communities had to periodically contend.

5.3.4. Incentives

As discussed above, with globalization and the mobility of capital, as well as devolution of responsibilities to regional and local levels, many local leaders perceive the need to cultivate economic climates that will be attractive to business in addition to making or maintaining their communities as appealing to workers. They often assume that economic incentives are a requirement for remaining competitive as communities vie for companies looking to (re)locate. A member of the Jackson County Board of Supervisors illustrated the tensions his community faces this way: "We get beat up all the time for giving [tax] exemptions. But people would complain if we weren't trying to bring in new business, we'd become non-competitive. We don't want to offer too much, but we want to offer something. Today businesses look at hundreds of locations. All places have advantages, you may think you have the best place, but so does everyone else" (SB27 2008). There is also a sense of keeping-up-with-the-Joneses in the discourses of economic development and planning officials, indicating the pressure they feel to broaden existing tax and incentive policies to match and out-do what other locations offer. At the same time, this discourse highlighting competition between communities may mute disagreements that exist within communities over development (see Cox and Mair 1988).

Companies may also try to use this competition as leverage during discussions with local economic development officials. For example, the Jackson County supervisor (SB27 2008) continued his comments by describing a discussion he had with a company comparing incentives in Alabama and Mississippi and talking about how community development is a key concern for economic developers:

Today you can possibly bring in the high-tech, high-paid, no smokestack businesses here. Now people are very conscious of greenhouse gases. People want to get good businesses. There are very few that come along, 800-900 communities are competing for them. To get them to look at you, you have to have an active economic development effort. I was speaking with a president of a company a while ago. He said that [Alabama] will exempt all of the school taxes so why should he come here where he had to pay them. I told him that at the time we had more L5 [superior performing] schools than elsewhere in the state, we have a very good school system and you can see this in the number of private schools. [...]

Mobile County has lots of private schools, but there it's because of quality. They're getting better. A couple of years ago they passed a bond and were finally able to build some new schools. They had infrastructure problems. Over there most of your management would have to send their children to private schools, here they don't have to worry about that. Besides, we hope that any business that settles here would want to support the education system so their employees would have these opportunities. He seemed to accept that. They didn't come here, but they didn't go to Alabama either. And I don't think that this was the deciding factor. They're looking at all sorts of things. One executive wanted to see the golf course here. So after our meeting I brought him up and drove him around. He was interested in the quality of life, schools, recreation opportunities. He was impressed. They didn't come, but he sent me a letter telling me how impressed he was by our quality of life. We've tried to make sure that whoever is coming in has enough affordable homes. We're putting the infrastructure in place that allows for additional development. (SB27 2008)

As this discussion illustrates, community development concerns, such as schools, housing, and recreation play a role in how economic developers market their communities to businesses and also how businesses look at potential locations for facilities. Quality of life concerns are also important when it comes to attracting and keeping workers. An economic developer in Texas described the renewed focus on community development as the need for skilled workers increases in his community:

In the last two to three years there has been more discussion of the quality of life than in the past 20 years before that. Before it was a 'blue-collar way of life.' Now there is a change from men drinking beer; there are families. Now we are experiencing a 'brain drain.' All of the kids are leaving for college. [...] My new job is to bring in skilled workers, not business. With skilled workers, business will come. [...] People want to live and work in a good place.' (SD01 2007).

By contrast to community development efforts, which invest in infrastructure and aspects of the community that directly increase public quality of life, economic incentives are aimed at reducing production costs for business (see Table 5.2). Incentives, such as in the form of financing through revolving loan funds and tax relief, are often meted out through regional or local organizations or authorities for specific projects (e.g., buying equipment, job creation, building expansion) with funding primarily from federal and/or state sources. Decisions about which companies qualify for incentives are often based on the number of jobs created by and/or the investments made to the project. Different incentive programs are aimed at distinct types of businesses (e.g., small, large, minority owned), projects (e.g., equipment purchase, real estate development, facility construction, research and development), and geographic locations (e.g., rural, high levels of unemployment). Other incentives include public investment in business support services, such as training centers and business parks, and agreements to provide other infrastructure (e.g., access roads).

To complement federal programs that are administered at the state level and also provide funding to meet their own objectives, states have explicit incentive programs, such as their own enterprise zones and tax credits (see Table 5.2). In general, these programs allow states to

channel public funding (whether from the federal government or state coffers) to private enterprises in order to direct the course of development in certain ways. For example, money can be set aside for favored industries, companies, communities, and projects. Many are utilized when states engage in efforts to recruit companies and projects to their states. Notably, states also highlight less tangible incentives to out-of-state industry, such as right-to-work laws and the work ethic of their workforce.⁴

⁴ Historically lower-waged labor has been a draw for manufacturing companies relocating from traditional industrial centers into southern states, though as many noted this is changing as higher-waged jobs grow in their communities. As some localities have experienced increased competition for labor with industrial build-up, wages have risen, creating incentives for skilling up the workforce to grow high-wage, high-skill jobs (SB05 2007). So, in addition to and/or in place of describing a labor force willing to take lower wages, locational promoters also talk up local “work ethic,” entrepreneurship, sense of community, and quality of life (see SB11 2007; SB19 2007; SB27 2008).

Table 5.2.

State Incentive Programs

State Incentive Program	Description	States with Programs
Tax credits	Economic development tool to spark private investment in communities. Tax credits come in many forms, including tax increment financing and tax relief programs.	TX, LA, MS, AL
Enterprise zones	As with federal enterprise zone-type programs (e.g., renewal communities), these are focused on increasing investments within economically distressed communities. In granting companies incentives (often in the form of tax exemptions), most states look at how many jobs are anticipated to be created, and some consider degree of proposed capital investment and/or job retention.	TX, LA, MS, AL
Tax abatements	A widely used tax relief program which reduces tax liability for certain properties for a delimited period of time.	TX, LA, MS, AL
Industrial development grants	State money is provisioned to local authorities (including counties, industrial development boards, and economic development councils) for the purpose of preparing land for a development project.	AL
Enterprise fund	State-level fund used to provide financial resources for specific projects.	TX
Capital funds	State-level funds that can be used to finance infrastructure and real estate development assistance in non-entitlement communities.	TX
Industrial revenue bonds	State or local entities issue bonds to generate funds from investors to make loans to build or buy land, facilities, and/or equipment. Public entities own the land, facilities, and/or equipment and lease it to awarded companies for a set period of time, at which time title is transferred. Companies can benefit from these arrangements, in part, because they are exempt from some taxes on the item(s).	TX, MS, AL
Industrial access road and bridge	State funds are provisioned to create access infrastructure to new and expanding industrial sites.	AL
Revolving loan funds	Loans are made to businesses or public entities at favorable market rates. New loans are made as old loans are repaid. The federal Economic Development Administration has a revolving loan fund that is meted out through local level development entities, but states also sponsor their own funds such as for small and minority businesses.	TX, LA, MS, AL
Industrial training programs	State sponsored workforce training programs that offer businesses services such as customized training.	AL

The availability of a skilled workforce is an important consideration for at least some companies when deciding where to locate.⁵ For communities attempting to attract new businesses for the purposes of economic development, the education and quality of the local labor pool are often important. There is an assumption among planners and government officials that global competitiveness requires an educated, flexible, and highly literate workforce (Farrell

⁵ Lack of investment in human resources has historically been a critique of those studying economic development in the South. For example, a 1971 report supported by the Department of Labor's Manpower Administration (Hansen 1971) problematized the disjuncture between available education and training programs and the skill needs of new industries.

2001). Though the U.S. fabrication and shipbuilding industry has been criticized for failing to match the sophistication and technical advances of international competitors (see Volume I), and a large proportion of the industry workforce fills un- or semi-skilled positions, officials in several companies noted the importance of the experience of the local workforce as a factor in their siting decisions. Consequently, workforce training programs can be major tools in state and local economic development strategies.

Often these efforts involve the public education system, particularly community and technical colleges. Community colleges' roles in economic and workforce development have expanded over the years (Dougherty and Bakia 2000; Grubb et al. 1997). Through the federal Workforce Investment Act of 1998 (WIA), many colleges function as training providers, and they end up depending on WIA funds for portions of their revenue. They also sometimes help to operate one-stop centers.⁶ The goals of the WIA require that training be conducted in ways that produce workers who fulfill the needs of business. While a market-driven model for workforce development appears to be an efficient way to ensure that potential and current workers have the skill sets that match available jobs, thus ensuring that workers have job opportunities, some have raised critiques. On the surface, businesses rather than students are given primacy (Shaw and Rab 2003), which poses practical as well as philosophical difficulties for some educational institutions.⁷

Especially given the prominence of labor concerns in the study communities, issues related to the skills and training of workers were raised frequently in discussions with public and private sector officials. One of the biggest issues for local workforce development leaders is recruiting and skilling a workforce for industries with unpredictable and relatively frequent cycles. Down cycles deplete the local skilled workforce in a number of ways: (1) skilled workers may be laid off and leave the industry, (2) laid off workers and their families may leave the community, (3) loss of tax base results in less funding for local schools, and (4) community members may discourage their children from entering trades experiencing job loss during the downturns.

Workforce developers have responded to these difficulties in a variety of ways. In some cases, attention has been brought to creating a flexibly-skilled labor force that would be able to deal with the cyclical nature of industry. Like diversifying the economy, training workers to have

⁶ Nationwide, it is estimated that about 11% of one-stops operate solely or in conjunction with community colleges and 34% have community college staff working in the center. It is also estimated that about 40% of persons ("clients") going through one-stop centers and enrolled in training decided to receive training through community colleges (U.S. Government Accountability Office 2008a).

⁷ According to Shaw and Rab (2003), the market-driven model and delivery leaves ambiguous post-secondary institutions' "customer." Students, business, and the state all provide different constituencies with variable needs that institutions must show they are meeting through accountability measures. There is also an assumption that institutions will utilize these measures through quality control programs. However, institutions vary in terms of their capacity to collect and manage, let alone use in applied ways the data they are mandated to collect (Shaw and Rab 2003). It also may result in more private sector involvement in school governance (Dougherty and Bakia 2000). At the same time, private sector involvement in education is not a new phenomenon. Job training at communities colleges began in the 1920s. Several decades later, in the 1960s in the South, "contract" or "customized" training started as a means to attracting industry; since that time, the trend has spread as a means of maintaining business and fostering internal growth (Dougherty and Bakia 2000). One study of U.S. community colleges found that more than three-quarters did contract training of some form (U.S. Government Accountability Office 2008b). Many colleges also have special centers on their campuses to provide services to business. For example, the Mississippi Small Business Development Center is located on the campus of the University of Mississippi, while Mississippi State is home to both Mississippi Workforce University and the Industrial Outreach Service.

more well-rounded skill sets helps to mitigate the risk to workers and communities should a business close or there be a downturn in the industry. Workers who are flexibly trained are better able to adapt to rapid changes in the labor market. In a globalized economy, this is an increasing emphasis. For example, “lifelong learning” is a focus in Louisiana’s workforce development agenda. The need for flexible training is also a concern in places such as Bayou la Batre, where elevated high school dropout rates were discussed as follows by a local reporter:

There are a lot of guys in the baby boom generation whose fathers took them out of school in high school and said that you’ll be on a boat, won’t go back to school. Probably doesn’t happen as much today, or at least it hasn’t gotten the attention of the authorities. Now the kids who drop out are ones who can legally do so. It’s a crazy thing, an inertia-bound institution type thing, they drop out to work in their dad’s business. This would have been justified a few generations ago. At that time the shrimp and oysters commanded a high price, you could make good money. Now they drop out and get into a dead-end profession. Globalization requires dynamic change, these people drop out and don’t get the education they need to compete (VP009 2007).

Many involved in workforce development were explicit about their desires to create programs that produced workers that would fit directly in with area business demands. Above it was noted that many of the workforce development efforts attempted to align training with specific skills currently required by area business (and generally the business concerns attracting the greatest attention were those large, politically powerful companies). For example, a person involved in a training program in the Brownsville area said their program was trying to

get a little more input about what industry needs, what the companies are expecting from our students. In the past, it hasn’t been what the industry is looking for.... If we had a real good advisory board committee, where we could get a whole bunch of information about what they need and some of the procedures that they use, then we could transfer that to the students. Then maybe things would work together better. That will make the students better to them up front. They wouldn’t have to train them completely different (RC060 2008).

Along with involving business in training program planning to increase the applicability of training efforts, some groups have taken steps to improve enrollment. Several approaches aim to address the negative image of craft trades. For example, recently, the National Shipbuilding Research Program (NSRP) embarked on an industry image project. Through this effort, advertising spots were developed associating shipbuilding with extreme sports by highlighting their exciting dimensions in relation to quotidian office jobs. As in other fields, companies have also developed career paths to try to show workers that there are opportunities for advancement and as a strategy for worker retention.

Training can be expensive, especially given high levels of workforce turnover. Some fabrication and shipbuilding companies prefer to train workers specifically to their needs and work environments and at least some of them, particularly large yards, are willing to absorb worker training costs. Still, many companies take advantage of publicly-subsidized training programs and other subsidies. One recipient noted that state subsidization of private sector

training costs gave the companies an incentive to train even with the risk that the employees they train will not remain with them.

Still, despite their wide usage, incentive programs can be controversial. Critics raise questions about the criteria for support, as well as the potentially destabilizing effects of granting incentives based on growth. For example, incentive policies with requirements for minimum investments favor larger businesses over smaller ones. Requirements for job growth rather than job maintenance might also foster instability in the local job market, create competition for labor that stresses existing businesses, and provide incentives for business expansion when there is not a labor force to support the expansion. In the presence of workforce shortages, efforts to attract new businesses that must recruit and maintain a workforce may be called into question (SD01 2007). While longer-term employees may be able to demand higher wages and more benefits from their companies, because incentive programs are not designed to encourage or support employers in retaining employees for the long term, it is not clear that overall the workforce will benefit.⁸ Instead, if they encourage employees to leave some employers for others, incentive programs may have the overall effect of depleting the knowledge base of local companies and adding to inefficiencies (SC11 2007).

Offering very large incentive packages during competition with other locations to attract specific companies can also put a halt to other industrial development. Disparities in incentive offers may also exist due to differing amounts of political capital among businesses, raising concerns of favoritism and questions about whether incentives are disproportionately used to keep viable the most visible companies. Tradeoffs that may come with abatements, such as loss of taxes and decreasing property values, can also be raised as criticisms (e.g., Morgan 2007). Moreover, the underlying assumption that all growth is “good” ignores alternative perspectives of development that instead favor sustainability (see Lélé 2000[1991]).

Additionally, incentives may not actually be necessary to attract business given other draws to the area, such as available facilities and infrastructure, the existing industrial base, and the geographic location (SF13 2008; SD09 2007). Fabrication and shipbuilding businesses in particular have very specific geographical and infrastructure requirements. Especially for shipyards, some of the factors affecting locational and expansion decisions include channel depth; waterfront land values; accessibility of needed supplies and support industries; skill level of local workforces; infrastructure support such as access roads, ports, and housing; and, for those involved in oil and gas, proximity to offshore oil and gas fields.

Those supporting incentives, though, point to the long-term benefits to the local tax base of recruiting businesses and supporting business expansion. Some argued that recruiting a high-profile company can cause other industries and businesses to more seriously consider the state as a site for relocation. For example, many involved with development in Alabama situate the nexus of the current economic growth with the successful recruitment of Mercedes-Benz in 1993 with a large incentive package (e.g., Alabama Development Office n.d.; SA01 2007). Acquiring a flagship development may also help to rebrand a location and set it up as a hub for a certain type of industry (e.g., automotive, fabrication) or give it a foothold in the global economy. It may also produce a multiplier effect, which is intended to offset what is invested in incentive packages,

⁸ Notably, one of the GO Zone programs was the Employee Retention Credit. Businesses that were inoperable within the GO Zone due to damage from Hurricane Katrina for a specific period of time were eligible for a credit equal to 40% of qualifying wages up to \$6,000 during the dates the business was not in operation or until December 31, 2005 (Smith 2008).

through the creation or maintenance of smaller support companies, retail, and other businesses, and also the wages received by employees that are spent in the community.

5.4. CASE STUDIES

In the following pages, contemporary strategies adopted by communities in the study areas are discussed using examples from south Louisiana and southern Mississippi. These strategies include efforts to ease production costs through measures such as economic incentives and publicly-funded workforce development programs, community development as a means of attracting skilled workers, and diversification plans to buffer communities in the face of industry loss. The strategies are also consistent with the policy literature reviewed in the opening sections of this chapter. Though the case studies focus on two communities, due to the dominant economic role played by shipbuilding and fabrication in the region, all study communities pursued economic development strategies that recognized their dependence on these industries. In several cases, including Bayou la Batre in the east and Port Isabel in the west, debates over economic development, and particularly the use of waterfront properties, have been contentious in recent years. In southern Alabama, for example, efforts to pursue residential and recreational projects spurred the establishment of the Alabama Working Waterfront Coalition, which helped fund an inventory of the Alabama Gulf Coast's working waterfronts in support of seafood and fishing industries (Mitchell 2007).

5.4.1. South Louisiana

In recent years, Louisiana has set out aggressive economic development agendas. The state has strongly supported the use of tax abatements and economic development incentives to attract industry. Louisiana was the first state to establish a state enterprise zone program and, with 1,700 zones throughout the state, remains an outlier (Wilder and Rubin 1996; Turner and Cassell 2007; Pulsipher 2008). By comparison, Alabama has designated only 28 zones. As of 1999, under a policy enacted under Governor Foster's administration (1996-2004), companies neither have to be located within enterprise zones nor employ people within zones to qualify for the incentives (City Parish Planning Commission 2009). To be eligible, companies must create minimum numbers of net new jobs within specific periods after the planned project start date: (1) at least the size of 10% of their current workforce within 12 months, or (2) at least five new jobs within 24 months. The business must hire at least 35% of net new workers from at least one of four targeted groups: residents of enterprise zones, recipients of public assistance, workers lacking in basic skills (e.g., less than a ninth grade reading, writing, or math proficiency), and/or people who are physically challenged (Louisiana Economic Development 2009). Finally, the program differs considerably from federal enterprise zone-like initiatives (e.g., Empowerment Zones, Renewal Communities). The federal programs focus on public-private partnerships in distressed communities; these local entities are charged with creating their own agendas and plans for community growth, and dispersing tax incentives. They are more broadly concerned with community as well as economic development. By contrast, Louisiana's enterprise zone program is an ultimately state-controlled tax incentive program for job creation in the state. It is neither as geographically bound as the federal programs nor focused mostly on job creation for persons experiencing economic or other hardships.

Foster strongly backed the use of tax incentives during his administration despite critiques against industrial tax breaks. Legislative effort stemmed especially from several developments during the mid-1990s. For example, Fruit of the Loom laid off more than 2,300 workers in

Acadiana Parish. Also, environmentalists raised concerns about several other state-backed industrial projects (Redman 1997). Critics questioned the lack of accountability of firms receiving tax incentives and the ultimate benefits received by the state (e.g., Friloux 1997; Griggs 1997; McMahan 1997). A failed 1996 bill sought to require companies that shut down before the end of the exemption period to repay all the tax breaks they received (Redman 1997). Other bills and efforts in the late 1990s attempted to reform or abolish the industrial property tax exemption. Created in 1936 as a means of stimulating industrial growth within the state, the program was restricted to manufacturing companies in 1938. The program expired in 1941, but was reinstated in 1946 to again facilitate industrial development and job creation (Duval-Diop n.d.). The target for the incentive is new or expanding manufacturing facilities. It exempts qualifying companies from local property taxes on plants and equipment for up to 10 years. One of the unique aspects of this incentive is that school taxes are included in the exemption; all other states in the U.S. exclude school taxes from such exemptions.

During Foster's administration, lawmakers voiced a number of concerns about the incentives: companies have little accountability for maintaining investment in the state after receiving the tax breaks, exemptions are approved for companies that do not qualify as "manufacturers" (see McClain 2001), and such exemptions take money away from schools. One failed proposal for reform would make companies accountable for maintaining the jobs they created (McMahan 1997). A series of failed bills proposed removing or phasing out schools from this exemption (Anderson 2000; Redman 1998, 2001; Darce 1999; Wardlaw 2000). The exemption was also subject to legislative review in the early 2000s in the midst of a fiscal shortfall. Both the Louisiana House of Representatives' Select Committee on Fiscal Affairs (2001) and the Louisiana Law Institute (Times-Picayune 2000) recommended reforms to the program. In Spring 2000, Foster announced a moratorium on the 10-year property tax exemption but a week later cancelled those plans (Bongiorni 2000).

In 1997, in an era of federal spending on workforce development, Foster created the Louisiana Workforce Commission to determine how workforce training funds should be spent and to streamline the state's workforce development programs. Also in 1997, Louisiana's legislature passed the Tuition Opportunity Program for Students (TOPS), a state-funded scholarship program hailed as "the most generous state program in the entire nation and is specifically designed to encourage the brightest Louisiana students to attend Louisiana colleges" (Newsline 1997). In 1999, following reports that more high schools students were taking the SAT test and that their scores had risen 0.2 percentage points, Governor Foster was quoted as saying, "The end result for Louisiana will be a better-educated workforce, a workforce whose earning power will provide a better quality of life for all of us" (Newsline 1999). Still, his efforts to develop a high-tech economy with skilled labor needs met with problems because the state could not provide workers to fill those demands (Redman 2000). In 1999, TOPS was expanded to include scholarships to enable students to attend technical schools. Also in 1999, the Louisiana Workforce Commission initiated the Incumbent Worker Training Program, a \$6 million state-run program funded with monies collected through unemployment insurance to help employers pay for upgrading worker skills; the program was expanded to \$50 million in 2000 and has remained at that level since.

In 2000, Vision 2020 was initiated under Foster as a 20-year state development plan. The plan was somewhat revolutionary because it was one of the first to identify the importance of thinking about comprehensive economic development (Randolph 2005a). Concern over the state's poor image both within and outside the state provided a context for community and

workforce development efforts that strove to make the state a desirable and better place to live (Bongiorni 2002a). Vision 2020 attempted to recentralize economic development efforts in the state. In 2002, the state's lead economic development department adopted a cluster approach to economic development, whereby investments were made in recruiting companies within nine targeted industry sectors (biomedicine, energy, information technology, logistics and transportation, entertainment, advanced materials, agriculture, manufacturing, and petrochemicals) and enhancing the state's business image (Bongiorni 2002b). To accomplish this, the department hired 15 specialists from each of the sectors (Scott 2005). This approach attempted to build these industries over the long term from the bottom up (Randolph 2005a). It sold the state to potential businesses on the basis of the state's "business-friendly climate," and the state's investments in improving infrastructure, education, and worker training (Bongiorni 2002a). Foster also had plans to privatize the state's economic development department, though this was rejected by voters (Randolph 2005a).

When Governor Blanco took office in 2004, however, the state was still facing years of accumulated job out-migration and a relatively poor showing in business recruitment efforts. Although there were questions during her campaign as to her commitment to economic development, after she was elected, she quickly laid out a development agenda that quelled some business fears (Scott 2003). While continuing Vision 2020 as the long-range plan, she also initiated (1) a public relations campaign to sell the state to people both in and outside the state, (2) plans to help foster small business, and (3) investments to improve the state's highways (Scott 2004). The new economic development secretary, Mike Olivier, who had previously been the economic development director of Harrison County Development Commission in Mississippi, initiated major changes to the state's economic development office. He refocused the cluster approach, directing resources towards economic development strategies for marketing and recruiting; the target industries were reevaluated and the department restructured so that it was not built around those particular industries (Randolph 2005a, 2005b; Scott 2005). Blanco also worked to improve the state's education system, making the case that higher education, research, and economic growth are interlinked. She stressed the need for universities, government, and private industry to work together (Sanders 2004). Under her administration, Lieutenant Governor Mitch Landrieu launched a campaign to develop an arts and cultural identity for the state as a means for attracting and retaining educated workers and fostering economic development (Sayre 2004).

Though Governor Blanco argued for a broad approach to community development, she, too, supported tax incentives as a means of attracting investment in the state. For example, in 2005, the Angel Investor Tax Credit was established to foster both small business startups within the state and job creation. Individual investors are allowed to apply up to 50% of the investment as credit toward her or his income or corporate franchise tax liability, provided the individual invest in at least three years of the early stages of an approved wealth-creating business.⁹ The program focuses on startups in fields related to higher technology, telecommunications, biosciences, medical devices, agricultural technology, and media and entertainment (Barnow and King 2005).

⁹ Approved businesses must qualify as Louisiana Entrepreneurial Businesses. Requirements for this designation are 50 or fewer full-time employees, and either gross annual sales less than \$10 million or a business net worth of less than \$2 million (Barnow and King 2005).

In 2007, the state formed the Louisiana Mega-Project Development Fund (Perilloux 2007).¹⁰ Created with \$150 million left over from funds set aside for recruiting the Thyssen-Krupp steel mill, the fund can be used by the state economic development office through the governor to quickly fashion together incentives (not exceeding 30% of the total costs of the project) for economic development projects that propose to create at least 500 new jobs or generate \$100 million or more in new capital investment. One of the benefits of such a fund is that the governor can quickly act to recruit high investment projects without having to go through the legislature. The fund was many times larger than the \$10 million Blanco had been given for her rapid response fund, which could be used in similar ways (Perilloux 2007).

Under Governor Blanco, the state workforce development plan focused on skills training and lifelong learning (Blanco and Smith 2005). This is consistent with Vision 2020, which has as one of its three goals to make the state into a “learning enterprise.” Here education and workforce skilling are envisioned as being streamlined into a unified and constant process. The state’s Work Ready! certificate,¹¹ which was established in 2006, embodies the notion that basic education and “soft skills” (such as the ability to gather and process information and problem-solve) are necessary foundations for all workers. As with diversifying the economy, training workers to have a more well-rounded skill set was perceived by program developments as helping mitigate the risk to workers and communities should businesses close or in the face of local industry downturns. Workers who are flexibly trained or are “lifelong learners” are better able to adapt to rapid changes in the labor market. In a globalized economy, this is an increasing emphasis.

Under Governor Jindal’s administration (2008-present), workforce development was again subject to reorganization. Jindal established his vision for a “New Louisiana.”¹² To realize his goal, he focused on ethics reform, business tax cuts and reinvestment in economic development priorities, and workforce development reform (Office of the Governor 2009). Jindal’s office has identified the discrepancy between the skills needed by state businesses and the education and training received by those in the workforce as the site of particular concern (Office of the Governor 2009). He has called for major reforms to the state workforce development system, including (1) aligning workforce needs, market demands, and available jobs; (2) immediately responding to workforce challenges and opportunities; (3) maximizing the involvement of the private sector in designing relevant training programs; (4) broadening career options for high school students; and (5) recruiting and training new workers, including those out-of-state. Though some have argued that many of his proposed reforms are cosmetic (Millhollon 2008), the new model for the state system is said to “move Louisiana toward a business approach to workforce programs and away from a bureaucratic system” (Office of the Governor 2009). As part of that move, a rapid response fund for workforce development was created, which emphasizes the need to align workers (many of whom are portrayed as outside the labor force), available training programs, and the types of jobs available in local communities. It focuses on

¹⁰ The Texas Enterprise Fund is a similar fund authorized by the Texas legislature in 2003 (Perilloux 2007).

¹¹ The Work Ready! certificate is given to applicants who take and pass all three core areas of a basic work skills test: applied mathematics, reading for information, and locating information. The certificate is supposed to signify that the holder is prepared to enter the workplace.

¹² Jindal described the “New Louisiana” as “a Louisiana that is the greatest place in the world to raise a family and start a great career, a Louisiana where our children do not have to leave home to pursue their dreams” (Office of the Governor 2009).

more closely linking the Louisiana Community and Technical College System with labor needs and bringing other aspects of the workforce system in congruence with the market. The market orientation is consistent with federal workforce development policies over the past decade.¹³ The initiative involves an aggressive job marketing campaign to potential workers outside the state. It implies that businesses are unable to meet their workforce needs from among the existing population in the state. This sentiment was expressed by many persons involved in the fabrication and shipbuilding industry.

During Jindal's first year in office, the state legislature greatly expanded the funds available to the governor for the purposes of economic development. While the governor publicly announced greater attention to retaining and expanding existing business in the state (Editor 2008), the funds available for investing in industrial recruiting increased many times. The state legislature authorized \$300 million in additional funds for the Louisiana Mega-Project Development Fund, bringing that fund to \$450 million (Perilloux 2008b). The governor's Rapid Response Fund was increased four times to \$41 million. The legislature also designated \$2 million in funds specifically for industrial site preparation to assist recruitment efforts (Perilloux 2008b).

5.4.1.1. Local Experiences of State Policies and Programs

As with most communities in the study areas, communities in south Louisiana have several public and private regional planning and economic development entities that play various roles in facilitating economic development. The South Central Planning and Development Commission (SCPDC) was formed in 1973 and covers six parishes, including Terrebonne and Lafourche (SC11 2007).¹⁴ The commission receives a grant each year from the federal government (specifically, the Economic Development Administration [EDA]), with whom they partner to provide services including business assistance, economic development planning, enterprise zone assistance, regional transportation planning, land use planning, and technical support to local economic development offices. The Commission is also responsible for keeping and updating the community economic development scheme (CEDS), which is required for receipt of some EDA funds. In addition, it administers a revolving loan fund (funded by the EDA) and provide community development assistance (South Central Planning and Development Commission 2006). Their main mission is to provide supportive services to their constituent governments.

The South Louisiana Economic Council (SLEC) was formed as a private organization among Assumption, St. Mary, Lafourche, and Terrebonne parishes in 1983 in response to the collapse of oil prices (South Louisiana Economic Council 2008). It was also formed to focus on marketing the region, which complements SCPDC's supportive services (SC11 2007). Under the assumption that business rather than government should direct economic development, the

¹³ Alabama's Governor's Office of Workforce Development acknowledges some non-market benefits of workforce development. It states that both education and skills are the basis for individual prosperity and a high quality of life for the state (Alabama Office of Workforce Development 2004). At the same time, like Louisiana, it has a workforce system that is industry-led and driven by the market. The language of both states' workforce development plans stress creating agile and responsive, yet focused systems that meet the changing needs of employers (see Johnson and Alford 2007; Blanco and Smith 2005).

¹⁴ There are eight sub-state regional planning and development districts within Louisiana. The Acadiana Regional Development District (established in 1967) is the development district representing St. Mary Parish.

parishes sought to pool their collective resources to foster economic recovery. Additionally, at that time, the national and state funders favored directing resources to regions rather than parishes in the interest of not duplicating or fragmenting services (South Louisiana Economic Council 2008).

SLEC is a good example of how regional development involves the coming together of entities with varying levels of influence and power, as well as differing agendas and goals. Over time, SLEC members' goals and approaches shifted, leading some to form single-parish economic development entities, such as the Terrebonne Economic Development Association (TEDA). Although rarely noted, regional approaches are not always easy, successful, or without internal conflict. Stakeholders sometimes have divergent and conflicting agendas, and those holding more power in the relationships can have greater influence in setting the course of regional development.

At the state level, the Office of Community Development oversees and awards the Community Development Block Grant Program, the Local Government Assistance Program, and the Disaster Recovery Unit. The goal of these programs is to improve the quality of life for state citizens (Office of Community Development 2008). Locally, community development activities are organized under community action agencies (CAAs). Terrebonne and Lafourche Parish each have a CAA organized under parish governments. The St. Mary-Vermilion Community Action Agency, Inc., by contrast, is a nonprofit that was established in 1967. All provide services to assist low-income persons in parish communities and attempt to address the causes of poverty. They administer a wide variety of social service programs, including an array of national programs for low-income persons in the parish, including Section 8, Head Start, and community development block grants.

The Louisiana Workforce Commission oversees the state's workforce development programs, including incumbent worker training, veteran's training services, and apprenticeship programs. Locally, one-stop career centers (which are local WIA entities) help businesses recruit employees and assist workers in developing career goals, obtaining skills and education, and finding employment.

The South Central Industrial Association (SCIA), which promotes industry in Lafourche, Terrebonne, and St. Mary's parishes, takes a broad approach to advocating for industrial development, both at the state and federal level. Its leaders are involved in boards and initiatives related to coastal restoration and hurricane protection, infrastructure development, revenue sharing related to outer continental shelf (OCS) development, workman's compensation and insurance monitoring, and workforce development. Especially concerned with the lack of skilled workers for the industries it represents, the SCIA formed a workforce task force aimed at analyzing issues not being addressed in other programs. Task force members include Human Resources personnel from the large employers in the region as well as the superintendents of local school districts and directors of area vocational and technical training programs. One of the task force's first actions was to design and conduct a survey of workforce needs of local industries. The SCIA's approach to addressing the labor shortage was aimed in two directions: recruitment of workers from the local area and beyond and conversion of workers from other industries. Consonant with state goals, SCIA leaders emphasize cross-training to create a flexible workforce, especially given the dominance of the offshore oil and gas industry and its cyclical fluctuations. SCIA's Get Ahead Go RED (Redefining Educational Directives) plan involves a highly developed marketing strategy for schools and the community, targeting high school dropouts in the hopes of redirecting them to a vocational-technical path and into fabrication and

shipbuilding industry jobs. In 2007, the Association received a state grant for a pilot program called “Work It! Louisiana” that would expose youth grades six through 12 to career paths in the south Louisiana job market and point out the value of technical educations (South Central Industrial Association n.d.). A primary goal of the SCIA programs is to bring prestige and credibility back into technical jobs.

Consistent with state goals, many involved in workforce development both in Louisiana and elsewhere were explicit about their desires to create programs that produced workers that would fit area businesses’ demands. Thus, the workforce development efforts attempted to align training with specific skills required by area business and industry at the time, with large, politically powerful companies, including shipyards and fabrication operations, actively involved in many initiatives. In a 2008 publication, SCIA president Anthony Bourdreaux discussed burgeoning job opportunities in the Houma area, and the necessity of paralleling public-private workforce development efforts with employer needs:

[M]erely having the jobs available is not enough. We must have a workforce with the matching skill sets to fill these positions. That is the critical element. This places even more emphasis on developing and training our workforce. By working closely with our state departments, legislators and business leaders, the SCIA is committed to enhancing the workforce development efforts in the Bayou Region (Bourdreaux 2008).

Those directly impacted by economic and workforce development policies include educators, students, parents, and employers. Among these, two issues generated the most discussion: the links, or lack thereof, between education and future work and the development of infrastructure in hurricane-prone regions. The focus on a college education, highlighted especially through the TOPS program, was criticized by some for its lack of recognition that college is not for everybody. Several programs had been designed specifically to challenge the notion that advanced or professional degrees were the best way to get ahead. Both educators and employers pointed out that youth with vocational training in high school or technical training after high school could command salaries greater than those leaving college with a degree. In addition, channeling youth who were not expected to make it to college into technical training programs was identified as one way to help reduce high student dropout rates. One educator suggested that doing so would have the long-term impact of helping to quell some of the gang problems and reduce the number of people on the welfare rolls (SE07 2007).

Responding to both state initiatives and local demands, and building on decades of interaction with area industries, local technical colleges had extensive partnerships and contractual agreements that enabled them and the companies they served to receive funds under the Incumbent Worker Program. In both Morgan City and Houma, fabrication and shipbuilding companies and technical colleges have partnered to create a streamlined process by which individuals may move directly into the workforce after their training. Industry and economic development officials stressed that these programs were a fundamental component of their strategy to increase the trained labor pool. To a certain degree, they could cite evidence that the plan was working. Through 2008, welding classes were full, with students being attracted by state scholarships and the lure of high-paying jobs associated with the oil, fabrication and shipbuilding industries.

Those in fabrication and shipbuilding also make use of a wide array of other public economic development incentives and financing opportunities to grow their businesses. Local and state entities have at times worked together to offer companies complex incentive packages to have specific projects undertaken in their jurisdiction. These packages often involve funding from multiple sources. For example, in 2006, Edison Chouest Offshore donated 50 acres in Houma to Terrebonne Parish (Hocke 2006; Perilloux 2008a). The company then arranged to lease 20 acres of the land from the parish in order to be eligible for certain tax breaks (Hocke 2006). That same year, the company received state approval for \$65 million in bonds under the post-hurricane Gulf Opportunity Zone Act of 2005 (GO Zone) to finance a project to build a shipyard on the land (Perilloux 2008a). In 2008, the project was counted as the second largest economic development project for the state. The project is expected to create 1,000 new jobs, tripling the current yard's workforce, at a cost of around \$100 million (Anderson 2008). The project also received monetary pledges from Governor Jindal (\$14 million: \$10 million from the legislature and \$4 million from the governor's rapid response fund for economic development), as well as state promises to dredge the navigation canal to at least 20 feet. Promises have also been made for the state Labor Department to tailor existing job training programs to meet the company's workforce needs (Perilloux 2008a).

Bollinger has also received incentives from both the state of Louisiana and Terrebonne Parish. In late 2002, the company's chairman challenged the public sector to offer the company incentives to build a proposed \$50 million yard, which would employ up to 3,000 skilled workers in aluminum fabrication. He indicated that the company would be shopping for sites outside Louisiana. Six months later, Terrebonne Parish presented a proposal to the company to locate at the port of Terrebonne with incentives totaling up to \$7 million. Incentives included publicly-financed improvements and utility breaks and low-interest loans from a handful of banks (Gresham 2003). Shortly after, the state offered Bollinger an incentive package worth up to \$30 million if the company agreed to build in the state, as well as put in writing they would retain and create jobs (Gresham and Hocke 2003). By December 2004, Bollinger announced that the company had decided to build in Louisiana because of the commitment the state had shown to the industry. In the final deal, as part of the first phase, the state agreed to finance the construction of a new \$10 million drydock in New Orleans East which they would lease to Bollinger for one dollar a year for 99 years (Ports Association of Louisiana 2005). For the second phase, the state promised Bollinger a \$20 million line of credit for the purposes of yard expansion, job training, and facility construction throughout its yards in Louisiana (Hocke and Buls 2005). A \$30 million incentive package, plus special credits through the state Enterprise Zone and industrial tax exemption programs were also given to Bollinger. The company agreed to match the state's investment dollar-for-dollar and increase its Louisiana workforce by 1,350 within five years of the second phase of the agreement, with penalties should they fail to meet job goals (Gresham 2004; but see Chapter 2, this volume, on the difficulties associated with recruiting a skilled labor force locally, forcing many companies to look elsewhere for employees).

5.4.1.2 Summary

Economic, community, and workforce development efforts in Louisiana over the last decades illustrate several tensions. At the state level, the focus has been on efforts to recruit large, job-producing industries through a variety of incentives. Some of these efforts have failed—notably the unsuccessful attempt to attract the ThyssenKrupp steel mill—and have been expensive

(Perilloux 2008c) and subject to little public oversight (Ballard 2008). When incentives are directed toward local, existing businesses, they appear to favor relatively large players as well, such as the major private shipyards of Lafourche and Terrebonne parishes. Within the parishes, there is a tension over workforce preparation, of better training for available blue collar jobs versus a college education. And, while there is a recognition of the need for economic diversification—of targeting a variety of “clusters”—oil and gas and its related industries remain the dominant feature in the state's industrial landscape, subject to recurrent cycles.

5.4.2. Southern Mississippi

Southeastern Mississippi has experienced a resurgence in economic development activity in the past decade. This has come in response to a number of factors, including the loss of industry and other regional economic developments. While shipbuilding and fabrication continue to be dominant forces in this region, the industrial mix is increasingly diverse.

As in Louisiana, the state of Mississippi has adopted several major economic development initiatives over the past decade. Governor Musgrove (2000-2004) launched the Advantage Mississippi Initiative for economic development in 2000. The initiative took a two-pronged approach to economic development: tax incentives and workforce training to fill jobs created by economic growth (The Advocate 2000). It attempted to improve the state's position so that it could effectively participate in the “new economy”. It was crafted through a public-private effort in collaboration with a development consultant (Business Wire 2000). The plan renamed the state's Department of Economic and Community Development as the Mississippi Development Authority (MDA). It also refocused the state's economic development approach to one that targeted growth in specific clusters, such as aerospace and remote sensing technologies, stimulated by the presence of NASA's Stennis Space Center (Mississippi Development Authority n.d.).

The initiative sparked legislation, which created and revamped several programs. One, the Growth and Prosperity (GAP) Act of 2000, is quite similar to other states' enterprise zone programs. Through this act, companies locating in a county within the state that has applied for GAP designation or in a location with an eligible supervisor's district not more than eight miles from such a county may be eligible for 10-year exemptions from state income and franchise taxes, some sales taxes, and most community taxes (excluding school taxes) (Holland 2000). Counties must have at least 200% of the state's unemployment rate, at least 30% of the population at or below the federal poverty level, and/or an eligible supervisor's district to be designated as a GAP county (Mississippi Legislature 2000). Another incentive established in 2000 was the Basic Skills Training Tax Credit, which allowed any employer who provided basic skills training to employees to receive a 50% income tax credit.

Amendments also led to the creation of an Ace Fund. The fund, composed of both public and private monies, was established to be granted to local economic development entities to enable them to respond to “extraordinary economic development opportunities”¹⁵ for new or expanding businesses. The Mississippi Regional Alliance Development Program was also authorized when Musgrove took office. The program promotes local intergovernmental alliances and allows local

¹⁵ "Extraordinary economic development opportunity" is defined as “a new or expanded business or industry which maintains a strong financial condition and minimal credit risk and creates substantial employment, particularly in areas of high unemployment” (Mississippi Legislature 2000).

governments to issue bonds for the purposes of project cost and revenue sharing. Most notably, it allows such cooperative agreements to be formed between government bodies of different states (Jeter 2003a).

Several months after Advantage Mississippi was instituted, the state quickly gained notice after it successfully attracted a \$930 million Nissan auto manufacturing plant to the state through a comprehensive state incentive package totaling more than \$350 million (Orndorff 2000; Boone 2000). The acquisition was hailed in many quarters as a boon to the state. Governor Musgrove was quoted as saying the following about what the acquisition of the Nissan plant meant for the state: “It (the auto industry) will literally transform Mississippi. [...] It will take us from being perceived as a small, rural, agricultural state to one that can handle a project of this magnitude and participate on a world playing field” (Poe 2001). However, the incentives offered to Nissan also proved controversial. As part of the legislation (the Nissan Act) to provide state funds for the project, the Mississippi Major Economic Impact Authority (MMEIA) was given the power to assemble land for the company through condemning private property and claiming eminent domain. Even though the MMEIA later acknowledged the property was not essential for the Nissan project to continue, it persisted in the face of the property owners’ opposition; it dropped claims to the property when the state Supreme Court was about to take up the case (Fuhrmeister 2005). Critics also took note of the successful efforts by U.S. Senator Trent Lott to designate the county in which the Nissan plant would be located a federal “renewal community” through a provision in a federal tax cut bill (Orndorff 2000). Such designation made Nissan eligible for additional federal tax credits.

Under Musgrove, several steps were taken to address the need of increasing the skills, knowledge, and learning capacity of the state’s workforce. In 2003, the state joined the federally-funded State Scholars Initiative (established in 1988 and supported by the federal government in 2002), creating Mississippi Scholars.¹⁶ The program sets up business-education partnerships, and provides participating high school students with a recommended rigorous course of study. The core course of study is determined by the state’s business-education coalition, which in Mississippi is between the Public Education Forum of Mississippi and the Mississippi Economic Council (State Scholars Initiative 2009). Local business leaders participate in the classroom, helping to motivate and encourage students.

Governor Barbour (2004-present) took office in 2004 facing a potential \$450 million state budget shortfall. One of his first actions was to help launch a comprehensive economic development initiative, funded by the private sector, called Momentum Mississippi. The program is based on several of the policy recommendations made by Blueprint Mississippi. This document provides a 10-year strategic plan for how to transform Mississippi’s regional economy into the “new economy”. The document was produced through the initiative of the business community in 2003 with Governor Musgrove’s support (Jeter 2003b). It aimed to create a business-driven model for improving the state’s position among the other southern states (Jeter 2003b; Lush 2004). It contains a broad range of recommendations, including improving pre-K school programs, diversifying the state’s economic base, strengthening the state’s physical infrastructure, and increasing adult participation in lifelong learning (Valcourt 2004). Momentum Mississippi was the result of the blueprint’s first recommendation: the reactivation of the state’s Economic Development Planning Act of 1987. This act called for the development of an

¹⁶ Louisiana also participates in this program. Louisiana Scholars was founded in 2006.

economic development vision and strategic plan that could be updated periodically: Momentum Mississippi.

Momentum Mississippi's steering committee members come from both economic and education spheres, reflecting the ways that the program intertwines education and efforts to develop the state's human capital in its economic development strategies. Program priorities mirror Blueprint Mississippi's recommendations, including the enhancement of the state's "business image," extending more supports to existing companies, diversifying and improving the economic base, developing the tourist industry, and improving educational experience and results for citizens throughout their lifespan (Momentum Mississippi n.d.).

The launching of Momentum Mississippi resulted in changes to several existing tax incentive programs. Many of the changes were made with the intention of attracting more high-growth, high-value business opportunities to the state. The Advantage Jobs program created in 1999 provided eligible companies a quarterly tax rebate worth up to 4% of their employees' wages (Business Wire 2000). Eligible companies must create a minimum number of jobs with above-average salaries and basic health benefits. The proposed changes added qualification criteria to focus the incentive on targeted industries to better balance traditional manufacturing and high-growth, high-value businesses (Mississippi Economic Development Council n.d.). The Mississippi Business Finance Corporation (MBFC) Rural Economic Development Tax Credit Program's list of eligible businesses was extended to include Research and Development / High Technology, as well as Research and Development Pilot Manufacturing. These types of companies, among others, are able to receive an income tax credit equal to the debt service on MBFC industrial revenue bonds made in their name (Mississippi State Tax Commission 2008).

The Job Tax Credit was also amended so the five-year income tax credit received by companies is based on percentage of total payroll rather than just number of jobs created. For example, while in previous years eligible companies creating at least 20 jobs in Tier I counties (or "developed" counties)¹⁷ would receive \$500 in income tax credits per job per year, the changes replaced the set dollar amount with 2.5% of payroll as the tax credit. The changes reward companies for higher payrolls (Mississippi Economic Development Council n.d.; Mississippi State Tax Commission 2008). Increasing the skills of the workforce was supported through amendments to job training tax incentives. Whereas Basic Skills Training Tax Incentive had targeted basic skills acquisition, the amended Skills Training Tax Incentive expanded the scope of the initial program to include any employee skills training or retraining (Jeter 2004a). As with the previous program, up to 50% credit can be taken on qualifying companies' income tax; trainings still must be provided or approved by local community or junior colleges. Expenses qualifying for the credit include those associated with instructors, instructional materials and equipment, and constructing and maintaining training facilities (Mississippi State Tax Commission 2008).

The initiative also established a new tax credit program in 2005. The Manufacturing Investment Tax Credit became available for manufacturing businesses that have been in the state at least two years and that are making an investment greater than \$1 million in buildings or equipment used in operations. Companies meeting these requirements can receive income tax credits equal to 5% of the eligible investments (Mississippi State Tax Commission 2008).

¹⁷ Many of the economic development incentives' eligibility criteria and award amounts are determined based on where jobs are created. Counties are designated as Tier One (developed), Tier Two (moderately developed), or Tier Three (less developed).

In 2006 and 2007, the governor called the state legislature to extraordinary session to consider, among other things, expanding the authority of the Mississippi Major Economic Impact Authority (MMEIA) (U.S. State News 2006, 2007). The MMEIA was established by legislation in 1989 at a time when the state was trying to attract a NASA project. It currently is a division of the MDA and is charged with securing the location and expansion of major economic impact projects in the state. Among its powers, it has the authority to loan state funds to communities for infrastructure improvements (e.g., ports, roads, schools, recreational facilities) within the vicinity of private or federal government capital investment projects: (1) of at least \$300 million, (2) that create at least \$150 million with 1,000 net new jobs, or (3) that create at least 1,000 net new jobs with wages at least 125% the annual wage rate of the state (Mississippi Code 57-75-11). The money for these funds is collected through issuing general obligation bonds. One of the changes made in 2007 was the establishment of the Mississippi Construction Rebate Incentive Program. The new incentive allows that state to give quarterly payments up to 3.5% of associated construction material costs for major capital projects (as deemed by the MMEIA) until such projects were completed (Mississippi Development Authority 2007). While the MMEIA provides a means for the MDA to create incentive packages without authorization of the state legislature, unlike in Louisiana, Mississippi's governor does not have a large discretionary fund to rapidly respond to large economic development projects (Perilloux 2007).

The same year that Momentum Mississippi was established, the Mississippi Comprehensive Training and Education Consolidation Act was enacted. It created the State Workforce Investment Board to oversee, coordinate, and streamline its comprehensive workforce development program. With the reorganization, the State Workforce Investment Act Board (which had governed WIA system activities) and the Community College Workforce Development Board were merged into this new super board, the majority of whose members were from the private sector (as dictated by the WIA). The move made community colleges more responsible for state workforce development and training programs and created incentives for federal workforce training dollars to go to community colleges (Northway 2004). The state's workforce development agenda positions the workforce as a basis for economic growth. Thus, increasing human capital is an implicit goal. In line with WIA goals, it endeavors to create a workforce system that is employer-led and driven by the needs of the private sector. In particular, the state aims to involve stakeholders from among their target industries, including advanced manufacturing, healthcare, small business, existing business, and business with high growth and demand potential (State of Mississippi n.d.).

Education in the state was also affected by a number of developments. Promotion of higher education occurred with the "Changing Lives Through Education" campaign in 2004 (Jeter 2004b). The effort aims to encourage and prepare K-12 schoolchildren to pursue four-year college degrees in order to be qualified for jobs in the "new economy." The campaign joins several other programs, such as Mississippi Scholars described above and GEAR UP Mississippi (both of which receive some federal funding), that have goals of increasing the number of young people pursuing higher education (Jeter 2004b).

Following Hurricane Katrina, the Mississippi Virtual Public School was developed to meet the needs of students who did not have access to education due to problems with educational infrastructure and lack of teachers. Offered through the Mississippi Department of Education, the virtual courses are available free of charge to Mississippi students grades nine through 12. It is funded by a grant from the BellSouth Foundation and the state. The mission of the program is to

make available a wide range of courses (e.g., Advanced Placement) that might not otherwise be locally available (Mississippi Virtual Public School n.d.).

In July 2007, the state legislature appropriated nearly \$3.5 billion, a historically high amount, to education (Sigo 2007). This included significant increases in funding for both community colleges and universities; it also included a 3% pay raise to teachers, bringing the total teacher salary raise over the course of Barbour's administration to more than 20% (Mississippi Business Journal 2007). Despite Barbour's long-standing opposition to the program, with his approval, the appropriation bill fully funded the Mississippi Adequate Education Program. This program provides state funding to tax-poor districts so that they can provide the basics to students (Pender 2007). After signing the bill, Barbour said, "Education is the No. 1 economic development issue and the No. 1 quality-of-life issue in our state. [...] Education is rightly the No. 1 priority of state government'" (Sigo 2007).

In addition to the incentives described herein, the state has a long history of offering economic incentives to new and expanding businesses. Although it became common for states to actively recruit business after World War I (Cobb 1984), Mississippi was the first state to offer state-sanctioned subsidies to businesses.¹⁸ In 1936, the state instituted the Balance Agriculture with Industry (BAWI) program. It grew out of concerns that the state ranked at or near the bottom of most measures of industrial development and was aided by federal programs, which encouraged state experimentation with economic development policies (Cobb 1993). The subsidies it offered were intended to reduce locational costs for companies relocating from outside the state. The resulting economic development was supposed to yield economic and psychological (e.g., enhanced quality of life) benefits for young people in the state. However, the program attracted mainly low-wage, labor-intensive businesses, and critics decried the loss of tax revenue and the lack of investment in firms already located in the state (Cobb 1993). Additionally, the subsidies were not necessarily a deciding factor in companies' decisions to locate in the state; perceptions about the qualities of the labor pool (e.g., "cooperative," "capable") were found to be of primary importance. The program was replaced just four years after being initiated as the state switched its strategy to focus on planning and research using mostly federal funds. However, during the war, jobs created by BAWI earned relatively high wages and recognition of this, along with growing acceptance of government's role in promoting, establishing, and maintaining conditions for industrial growth, helped to resurrect the program in 1944 (Cobb 1993).

Other incentives include the sales tax and use tax exemption for construction or expansion. Eligible businesses are able to receive up to one-half (for those located in Tier One and Two counties) or up to full (for those located in Tier Three counties) sales and use tax exemptions on component materials used in the construction, expansion, or improvement of facilities, as well as the machineries and/or equipment used within. Manufacturers and processors in the state who are expanding their operations, as well as data/information and technology intensive enterprises newly locating to or expanding in the state, are eligible for the exemption (Mississippi State Tax Commission 2008). Local governing authorities (board of supervisors or municipal authorities) also have the power to grant 10-year industrial property tax exemptions for new and expanding businesses; the exemption excludes school district taxes and taxes on finished goods and rolling

¹⁸ Incidentally, the first stand-alone tax abatement program was the Louisiana Industrial Property Tax Exemption of 1936.

stock. Eligible businesses include manufacturers, processors, refineries, research facilities, recreational facilities with an impact on tourism, and technology intensive enterprises (Mississippi State Tax Commission 2008).

5.4.2.1. Challenges at the Local Level

The state positions itself as a middle man fostering communication and coordination between public and private sectors within the state. The Mississippi code delimits the state's role in economic development as providing "a policy, a vision and a framework to encourage an environment conducive to entrepreneurship and rapid development in the state of Mississippi" (Mississippi Code §57-63-3 as cited by Momentum Mississippi n.d.). The Mississippi Development Authority (MDA) is home to both state-level economic development and community development programs. The MDA website, however, strongly highlights its role in economic development.

Workforce development, like the MDA, is organized under the governor's office. The Mississippi Workforce Investment Council is the state-board mandated by the Workforce Investment Act (WIA) of 1998. The Department of Employment Security organizes the state's WIA one-stop system (the Workforce Investment Network), unemployment insurance, and veteran's services, while the State Board of Community and Junior Colleges oversees adult education and career and technical education.

As with south Louisiana, southeastern Mississippi is home to public and private regional development entities. The Southern Mississippi Planning and Development District was created in 1967 and encompasses 16 counties in the southern part of the state, including Jackson County. It serves a very similar role as south Louisiana's SCPDC. Both are their area's economic development districts, which allows them to receive funding from the EDA, administer EDA programs such as the revolving loan fund, and provide various planning functions. The planning and development department also serves as an information resource for, overseer of, and provider of community development activities, such as services for children, job seekers, and the aged. Many federal community development services for persons of low incomes, such as Head Start and various family support services, are provided by the Jackson County Civic Action Committee, Inc. Founded in 1965, it operates as a private community action agency (CAA; JCCAC n.d.).

The private economic development arm in Jackson County is the non-profit development corporation, Jackson County Economic Development Foundation (JCEDF). It was formed in 1993 as a result of the Jackson County Board of Supervisors, the Jackson County Port Authority, and the Jackson County Chamber of Commerce Memorandum of Agreement to unify the county's economic development efforts (Jackson County Economic Development Foundation 2009). The corporation's political and financial independence reportedly benefits economic development because it gives it continuity by buffering it from changes in government offices and administrations (SB07 2008). However, like with South Louisiana Economic Council, the corporation receives a large percentage (in this case 40%) of its funding from public sources. By being "independent" and also a major driver in determining the course of development, it also means that local citizens have less ability to influence the development of their community through the democratic process.

The Jackson County Board of Supervisors also plays a role in economic development. It sets policies, goals, and objectives for the county's growth, as well as set property tax rates and ensure for the welfare of the county (Jackson County 2009). It also has the authority to give tax abatements to companies, though some taxes by state law cannot be exempt, such as taxes for school districts and roads.¹⁹ In the past, they would offer tax abatements at the rate of 18%; however, to remain competitive, they have increased it to 33% (SB11 2007). This indicates the pressures localities face as they try to keep up with what other business-friendly incentives are being offered in competing states.

A member of the Board of Supervisors reported that the board's primary role is to "create an environment that allows existing businesses to continue to be competitive" (SB27 2008). The secondary focus of economic development efforts, and the ultimate reason given for this approach, is the need to create and grow jobs, as well as generate funds from taxes. The board's focus on existing industry contrasts with JCEDF's mission to market the county to national and international firms in order to bring in new jobs to balance industry and business cycles. The tax incentives the board offers to newly-locating companies are tied to the quantity and quality of jobs created and the size of the investment the company will be making in the business venture (SB27 2008). Thus, highly-capitalized, larger, and high-paying businesses are prioritized and deemed "good companies," though there is also awareness that smaller, less-capitalized companies that create many lower wage jobs are also important. Incentives for existing business are done on a case-by-case basis and credit is given to companies who have been in the area long-term. Notably, attempts by economic development entities to create jobs would work against efforts to maintain and support local business in the context of a tight local labor market (as existed during the fieldwork period), unless jobs were created that required different skill sets.

Jackson County revamped its economic development effort beginning in 2000. This occurred around the time that Moss Point was losing many of its major businesses. The fear of losing existing major businesses is a specter driving many of the planning efforts.²⁰ The reexamination of county industrial tax incentives was primarily sparked by concerns that relatively high county tax rates, tax exemptions, state rules that allow industrial equipment to be depreciated very quickly, and county financial problems were leaving homeowners with an unfair tax burden (The Advocate 1999). While industry leaders argued that the revenue generated through plant expansions via increased payroll and payments to smaller support companies in the community

¹⁹ While school taxes cannot be exempt from property tax abatement agreements, which districts benefit from taxes accrued by companies locating outside of city bounds has sparked controversy. A refinery which located outside the city limits of Pascagoula had come to an agreement with the city that its property would not be annexed (SB20 2007); however, the plan was located within the bounds of the Pascagoula school district. When the refinery announced an expansion, a debate erupted at the state and local level as to which school districts should benefit from the expansion tax. Originally, only Pascagoula was to receive the revenue, but there were arguments made for distributing it across all county school districts because the land the refinery is built upon is owned by the county (Craig 2007). This raises questions about how taxes from industrial development should be allocated and whether existing boundaries are adequate for delineating the impacts that a yard or plant may have beyond the city in which it physically exists.

²⁰ Despite the requirements of the Jones Act, concerns were raised in several communities about the movement of shipbuilding overseas. For some, this necessitated the use of public subsidies in the form of incentives like tax abatements, construction financing like Title XI, and workforce development programs to mitigate differences in production costs between foreign and domestic yards.

more than made up for what they would receive in exemptions, critics argued that more than half the workers at the plants lived outside the county (some outside the state), so that much of the payroll benefits would not be experienced locally (The Advocate 1999).

The renewed economic development effort began with hiring economic development professionals. This was followed by the establishment of a committee of 15 citizens (appointed by members of the Board of Supervisors) that developed a local tax incentive policy (SB27 2008). Throughout, emphasis was placed on guiding economic development in the county through strong public-private partnerships. In 2002, a five-year economic development strategy called Partners in Progress was established by JCEDF as a means of bringing the private sector into planning and leveraging disparate resources for economic development. The effort was supported by \$200,000 a year by the County Board of Supervisors, as well as about \$3 million in private donations (Gillette 2002). The money was used to fund capital improvement projects to attract new industry. In 2007, a new \$5 million, five-year strategic plan, Progress in Motion, was announced. The plan focuses on five goals: developing industrial and commercial sites and infrastructure, conducting innovative development research, marking and recruitment of targeted industries, retaining and expanding existing business, and improving communication between stakeholders. Notably, just over two-fifths of the budget is allocated to marketing and recruitment efforts; exactly half that amount is reserved for retaining and expanding existing business (Jackson County Economic Development Foundation 2008).

The Mississippi Gulf Coast Alliance for economic development, a private regional body representing six southern Mississippi counties including Jackson County, has marketed the southern part of the state as a corridor for the shipbuilding, aerospace, geospatial, and marine science industries, and a leader in advanced manufacturing. Along with these industries, the JCEDF also markets Jackson County as a good fit for businesses from the energy and petrochemical sectors. Consistent with state goals, these represent efforts to diversify the local economy, especially into high technology fields that will create jobs for skilled workers and fill the void left by manufacturing firms that have left the area.

However, shipbuilding and fabrication continue to play a dominant role in the local economy. After describing the various large recent and potential economic development projects occurring in the area outside of the shipbuilding industry, one retired shipyard worker said, "There are a lot of small things. But the shipyard is the industry that holds pocket book and pocket together" (PP010 2008). Despite desires for diversification, once there are infrastructure and relationships in place for a certain type of industry, it may be difficult to try to shift the course of development. The local supply and distribution infrastructure established by heavy industries, such as shipbuilding, can also attract other companies, creating a cluster of businesses dedicated to certain industry sectors, hence the focus on developing specific target industries. Opinions vary as to whether or not the dominant presence of shipbuilders helps or hinders economic development. One economic developer reported that the existence of shipyards in the area was a sign to companies looking to relocate that the area had a skilled workforce (SB07 2008). However, a person involved in planning said that the dominance of a shipyard in the area made diversification very difficult because companies did not want to locate there and be overshadowed by and have trouble competing for workers with the larger shipyards (SB23 2008).

Regional developments are also affecting some of the economic development plans in southeastern Mississippi. Regional economies are not bound within a political or statistical area, but enmeshed with the surrounding geography as people, resources, and money are fluidly

exchanged. This sort of “spillover” effect was referenced in Mississippi in relation to the diverse array of businesses taking root in Alabama which were expected to both employ local workers and provide opportunities for new businesses in similar and support sectors. Thus, regional diversification and growth provide new opportunities for development, while also posing potentially significant competition for existing business.²¹

Lack of housing presents a challenge for community leaders, particularly since Hurricane Katrina (see Jackson County community profile). While housing is traditionally a community development concern, for some economic developers, lack of affordable housing due to rising costs of insurance, new regulations for houses located in flood planes or areas deemed to be high risk, and dearth of other related infrastructure, poses a problem for plans to create new jobs. Housing shortages make it difficult for companies to recruit workers from outside the area. They also enhance industry reliance on commuters and H-2B visa workers. Government housing programs typically provide support for low-income housing, which was said to not be appropriate for some of the middle-income families that were being targeted for workforce recruitment.²² Moreover, significant industry cycles that cause rapid worker influxes and exodus are disincentives to housing developers and to the development of rental properties. These exigencies have facilitated the creation of alternative solutions to worker housing (see below).

Industry cycles also have impacts on the local tax base, funding for schools, and workforce development efforts. In Moss Point, a person involved in the district’s curricula planning discussed the problems faced by the school and economic development efforts in the area given the recent loss of major businesses in the community:

The school district’s student population] decreased drastically since the industries left. The high school has dropped to a 4A school from a 5A school, there used to be 5,000 kids at the high school, but that's dropped. We're trying to rebuild without funds. If you have a good school district, people and industries move here, but you need the industry first. (SB24 2008)

He points to a seeming unsolvable dilemma: quality schools would attract businesses and families, spurring economic development, but industries were first needed to provide the revenue to develop quality schools. The framing of public education in these ways has implications for how districts and schools approach creating programs and focusing resources, as well as the ways in which they interact with businesses within their community. It positions industry as the primary resource and audience for school and district survival and operation (see discussion below).

²¹ In fact, a county in Mississippi was expected to contribute to the incentive package given to a Mobile-area economic development project (Kitchen and Murtaugh 2007). Interstate, regional economic development relationships such as this are authorized via the Mississippi Regional Alliance Development, a program established during Musgrove’s tenure.

²² In coastal Mississippi, though, the lack of hurricane recovery investment in low-income rental properties and affordable housing in general was of primary concern for many grass root organizations and non-profits (see Jopling 2008; Lynch 2008; Steps 2009).

5.4.2.2. Local Experiences of State Policies and Programs

Moss Point has launched a redevelopment campaign following the loss of several manufactures and chemical companies in the last decade. Moss Point's development goals contrast with the high technology focus of the county. In 2007, the city rebranded itself from the "Industrial City" to the "River City" (Associated Press 2004). One of the city leaders' foremost goals is to develop recreational and entertainment facilities, which is cited as one of the only ways to attract and keep a young labor force. On a city website, the vision of the new downtown Moss Point is defined as "a place where people can enjoy the beauty of the Escatawpa River, where locals and visitors can live, shop, and dine, and where modern facilities host the center of civic life and public services" (City of Moss Point 2009). During the study period, the city was using hurricane recovery CDBG funds to finance the revitalization of downtown spaces with a new fire station and city hall, and additional riverwalks (Rebuild Moss Point n.d.). The renewal of downtown spaces here as well as in several other communities suggests that leaders have embraced aspects of "new urbanism", which is an approach to planning that focuses on the physical environment and creating places for active citizen involvement in community life (Ganapati 2008). Or, at the very least, they are creating sites of consumption for citizens that open up retail, entertainment, and tourism opportunities that attempt to add to the quality of life of citizens and contribute to the local economy. In many places, improving the area quality of life was discussed as a potential means of alleviating some of the "brain drain" problems. At the same time, as discussed in the community profile, the change in direction for Moss Point was not very apparent within the community and residents seemed to have ambiguous feelings about it, raising questions about the effectiveness of concerted public relations campaigns and place marketing.

Shipyards in coastal Mississippi have utilized federal and state programs to finance their operations for many years. As in Louisiana, area shipyards and fabrication facilities, especially the large ones, have ties to federal and state politicians, as well as industry groups, and have employees who are knowledgeable about the types of public funding available for industry. Companies have used public programs to help finance operational and infrastructure improvements, as well as assist in the acquisition of a skilled workforce. In Pascagoula, bond-financing helped to establish the Ingalls' shipyard in 1938 (see community profile). Ingalls decided to locate in Pascagoula instead of Florida after he was promised a \$100,000 bond for channel deepening and a railroad spur (Wallace et al. 2001). The Ingalls' shipyard created a great number of jobs that were significantly different from the predominantly female labor, mostly low-wage, low-skill manufacturing jobs available in the South. The labor demands of the new yard, however, stretched community housing resources. Houses and barracks were quickly built through coordinated local and federal agency efforts.

The partnering of the private sector and the public education system occurs at the highest level of the state in the State Workforce Investment Board, which, as described above, has supplanted the state's community college workforce development board. Lobbying by industry leaders also occurs. For example, representatives of shipyards utilize their political power to request specific programs in the public education system and also participate in local education and technical programs. The Applied Technology Center (ATC) is a Mississippi-funded program in the Pascagoula school system that teaches state approved curriculum in a number of applied fields. ATC allows local industry leaders, such as Northrop Grumman, VT Halter, and Chevron, to visit the school annually or biannually to advertise and recruit students. These businesses also donate materials, including scrap metal, pipe and, in the case of Chevron, polymers. They are

also known to respond to industry interest in certain skill sets by offering classes that teach those skills. However, the center is not always able to comply due to the difficulty of competing for qualified instructors given the wages those individuals can garner in the industrial workforce. In fact, an ATC official reported that the majority of teachers at the center are retired, and are still working primarily to receive the health insurance benefits.

Northrop Grumman is also involved in secondary school cooperative education and apprenticeship programs for twelfth graders. The apprenticeship is competitive and students who complete it finish all the required coursework for the company's apprenticeship program. Assuming they go on to work full-time with the company, they have only to complete the on-the-job training portion of the apprenticeship and are eligible for a higher wage than comparable workers with only a high school diploma. Scheduling conflicts and differing expectations and regulations between the yard and the school, as well as no mandates that students finish the program or afterwards go to work for the Northrop Grumman, were said to be difficulties and costs associated with the program for the company. Companies more risk-averse might be inclined to not invest the time, energy, and resources in programs like this that have such uncertain outcomes.

The public sector also helps subsidize workforce training through scholarship programs. Career and technical students at community colleges may apply for full tuition scholarships, provided they have completed a two-year technical training program and graduated with a B average or better from a high school with a training agreement with the community college (Mississippi Gulf Coast Community College 2009). In south Mississippi, the local community college (Mississippi Gulf Coast Community College [MGCCC]) provided more direct training for companies. Both Northrop Grumman and VT Halter Marine have training programs that are run in conjunction with MGCCC. In both cases, the companies partner with the college to provide training both on-site and on the college campus. For VT Halter Marine, off-yard training instruction occurs on campus through a partnership that developed in 2007 through the Mississippi Technology Alliance (a Manufacturing Extension Partnership [MEP] affiliate center at the community college). This particular partnership was created to develop and institute a technical program for the purposes of training potential employees to be high-skilled welders; trainees receive their training and then are sent to the company as entry-level employees (National Institute of Standards and Technology n.d.).

Shipyards have been a particular focus for federal and state dollars following the hurricanes. Area shipyards have made use of hurricane recovery funds for capital improvements. Signal International's project for a deep-hole drydock received \$8.6 million from the MDA-managed Katrina Supplemental CDBG program. The application was made by Jackson County after a promise that the project would create 342 new full-time jobs. From that same pool of federal funding, VT Halter Marine is building a \$5 million pipe and marine fabrication building (Havens 2009). Northrop Grumman was given \$200 million in GO Zone bonds for yard improvements (Mississippi Business Journal 2008).

Workforce development for the fabrication and shipbuilding industry has also received an infusion of federal funds. The Gulf State Shipbuilder's Consortium (GSSC) was founded in 2006 through money granted by the federal government's MEP to the Alabama Technology Network (ATN) to help shipbuilders affected by Hurricane Katrina and address critical shortages of skilled workers (GSSC 2008a). It has endeavored to create effective ways to recruit and maintain workers in the shipbuilding industry on the Gulf Coast. As part of this recruitment and training effort, ATN has the goal of creating a regional cooperative group with members from Alabama,

Mississippi, and Louisiana to promote more effective cooperation between businesses, local governments, and educational institutions along the Gulf Coast. The GSSC has grown from having eight members at its onset to, at the time of the study, having 37 members, including the majority of the large shipyards and vocational institutions in the Mobile and Mississippi areas (GSSC 2008a). Many of GSSC's recent projects have attempted to promote the entrance and continuing employment of labor in the shipbuilding and fabrication industry, and to systematize certain labor requirements and training procedures in order to make more possible "worker exchanges" between the yards. To this end, GSSC has employed local public relations campaigns, developed call centers designed to answer the questions of potential workers, and created a website intended to introduce potential workers and other members of the community to the shipbuilding and fabrication industry.

The lack of standardized credentials amongst Gulf Coast yards is one impediment to the ready availability of labor. One of the ways GSSC hopes to address this problem is through developing competencies, curricula, and certificates for a number of crafts (e.g., shipfitter) (GSSC 2008b). Additionally, GSSC is developing a "shipfitters' boot camp" that is intended to help fill a high-demand occupation by getting new recruits to this craft trained as quickly and effectively as possible. In the focus group held in Mobile, some participants mentioned that the GSSC program had been conducive towards promoting cooperation between yards in the area, which were now more willing to take on contracts from one another. The opinion was expressed that this was the way relations within the shipbuilding and fabrication industry on the Gulf Coast would have to head in order for it to be possible for U.S. shipbuilders to eventually compete with overseas manufacturers in places such as Korea and Japan.

Federal money was also directed to workforce development for the shipbuilding industry within the state. Mississippi was awarded two "High-Growth High-Demand" grants from the U.S. Department of Labor (DOL) (MDA 2008). Those funds were used to provide training for the shipbuilding industry and other industry sectors. However, training capacity was found to be lacking due to infrastructure constraints that limited enrollment. In 2007, the DOL gave 18 counties in southeastern Mississippi a Workforce Innovations in Regional Economic Development (WIRED) grant. The program targets skills needed across a wide array of advanced manufacturing. Through partnerships forged between industry, community colleges, and the state department of education, it implements curricula in K-12 and establishes training and credential programs in Momentum Centers of Excellence (U.S. Department of Labor Employment and Training 2009).

Despite the infusion of money, the area was still found to be lacking in training facilities to meet the demand for skilled workers. In 2008, MDA submitted an application to HUD and was granted approval to use \$20 million of the Katrina Supplemental CDBG economic development program funds for a new shipyard metal worker training facility grant program (MDA 2008). In early 2009, Governor Barbour announced²³ the money would be used to create the Mississippi Shipbuilding and Metal Trades Academy near the Northrop Grumman site in Pascagoula. The facility would be operated by the Mississippi Gulf Coast Community College and ownership would ultimately fall on the college or the county (Wilkinson 2009). The investment of hurricane

²³ Notably, Governor Barbour was in Mobile, Alabama, at a Gulf State Shipbuilder's Consortium conference when this announcement was made, perhaps displaying the regional approach that had been started to addressing shipbuilding workforce concerns (such as through the GSSC) and foreshadowing the regional impact of facilities like this.

recovery funds would be used to create a facility most specifically in service of Northrop Grumman, but also for the other large shipbuilders and burgeoning industry clusters such as aerospace and energy. Establishing a special training center was also discussed as a draw for young workers to the field. Interestingly, a representative of one of the large yards was quoted in a local paper as saying the facility would ensure the stability of the shipbuilding industry (Nelson 2009), implying that the lack of skilled workers was a major cause of industry instability, not the cycles of project funding. This point illustrates the fundamental intention of this investment as a subsidy for the local shipbuilding industry, particularly one company, which would not necessarily address the financial volatility of the industry that results in such great economic impacts on the community.

5.4.2.3. Discussion

As with Louisiana, Mississippi has had several state economic development plans over the past decade. Goals, priorities, and strategies have shifted as different governors have come into office. Under Governor Barbour, economic development incentives have become more focused on recruiting higher technology industry. This represents a continued shift in the state and the South more generally away from traditional manufacturing. Coastal counties have become home to a range of newer industry sectors, though the economy of Jackson County is still largely defined by the fabrication and shipbuilding industry. While the larger shipbuilders have strong political allies, they increasingly must jockey with the burgeoning sectors for federal, state, and local funds.

While Hurricane Katrina caused much community devastation and worsened existing housing and workforce problems, federal recovery efforts infused the region with additional funds. As noted, some of this money has been channeled into supporting the fabrication and shipbuilding industry. Notably, coastal Mississippi now has more shipyards than it did before Katrina.

The use of hurricane recovery funds for economic development has proven somewhat controversial. The state's diversion of \$570 million of CDBG hurricane recovery funds from the development of affordable housing to a port expansion project led Mississippi N.A.A.C.P. and the Gulf Coast Fair Housing Center to sue HUD in late 2008 for failure to adequately review and assess the project for compliance with CDBG mandates (U.S. District Court 2008).

Some funds have been used to bolster workforce development projects for the industry. However, as also was noted, the lack of industry-wide certification makes forming a general workforce from which companies can draw difficult. This poses problems for companies that frequently go through periods of hiring workers. It also poses problems for workers who go through training programs without receiving credentials or other transferrable credit that they can use in trying to find new jobs.

While the skill- and vocation-based focus of many of the training programs (indeed, as supported by federal job training programs) helps to target the formation of technical competencies explicitly needed by businesses, it neglects that many of those entering the labor market lack basic reading, writing, and analytic skills (Wilson 1999).²⁴ These are issues that would be addressed in a more traditional, general education post-secondary certificate or degree program, which the state has at least nominally supported in recent years.

The issue of “brain drain” was also noted to be a problem. A person directly involved in workforce development said: “In the state, they do have problems related to keeping the best and the brightest because they don’t have a lot of high-level jobs that you would find in places like Memphis and Atlanta. They need a long-term solution to the problem and part of this is bringing up the population’s skill level” (SB05 2007). The conundrum for community leaders, though, is that if you increase the education or skill of a population, if you do not have jobs for them, they will leave the community. In some cases, increasing the skill level of the population was thought to be a means to attracting businesses, but this is an uncertain endeavor.

Additionally, as many implied with the statement that “college is not for everyone,” for those trying to learn a craft as quickly as possible to enter the workplace, degree or certificate programs may seem unnecessary and, in some cases, a barrier to employment. In such cases, focused, business-specific job training would be more immediately beneficial, though in the case of uncertain job tenure, the benefits of such an approach for the long term are questionable. The increasing public investment into specialized workers and infrastructure for this industry enhance the area’s reliance on this industry as an economic base. While a strategy to support existing industry, it is also risky given that business cycles are often caused by factors over which local and state entities have no control.

The question of who are the primary beneficiaries of workforce development, as well as economic and community development, efforts is a contentious topic. Federal and state workforce development programs position businesses as the drivers of training programs, with individuals and communities as secondary recipients. Many local leaders echoed this line of thought, though some attempted to position both workers and business as targets for their training work. For example, providing opportunities for advancement and improvement was discussed by an administrator at a large shipyard as a means of meeting worker desires as well as company needs:

We just have a philosophy called “Grow your Own”. We want to offer the workers new ways that they can better themselves and make more money and the computer systems and crafts training is one of these ways. Basically we’re a large company that runs like a small company. We had a fish fry here on Thursday and that is a task to pull off for a company this size. They want the workers to feel like they have a stake in the company (PP029 2008).

This mirrors rhetoric in the goals of the Mississippi Workforce Education Division of the state community and junior colleges: “using state resources to provide workforce education to the citizens of Mississippi giving them the skills needed to be more productive and have an improved quality of life, and to provide the employers of our state a better-trained and educated workforce” (Mississippi State Board for Community and Junior Colleges 2003-09).

However, as the questions that sparked the examination of Jackson County industrial tax exemptions at the turn of the century and the debates over the use of CDBG funds for economic development have shown, disputes persist as to the proper use of public resources to directly support and subsidize private industrial efforts.

5.5. CONCLUSION

As a significant economic force within many Gulf Coast communities, the fabrication and shipbuilding industry both drives and benefits from economic development efforts and resources targeted toward the region. Shifts in economic development priorities away from manufacturing and toward tourism or service, for example, can challenge the ongoing success of these industries. However, even as the fabrication and shipbuilding industry declines in some coastal communities, long-standing ties between industry leaders and politicians have ensured that policies favorable to the industry are put or remain in place. Shifts are most evident in places like southern Mississippi, where other industries have come to play a significant role in local, regional, and state economies.

This chapter has explored some of the tensions that exist as local policy makers decide where to allocate energy and resources for development: into the infrastructure, workers, and businesses that already exist within the community or into projects that will bring in new people, businesses, and industry into the community. One of the lingering questions is who ultimately benefits from these policies. This chapter has simply tried to point out areas of tension and potential conflict when the focus is on a traditional definition or approach to economic development.

An overriding though sometimes tacit theme is a sense of localities being at risk of losing or not obtaining private capital investment. Such concern drives many of the incentive policies discussed above, which focus, as some economic developers explicitly stated, on ensuring that existing business were as profitable as possible. When businesses or industries leave, localities are left with a depleted tax base and higher levels of unemployment. They may also be left with industry-specific infrastructure and labor skills, not to mention environmental impacts, which impact and limit the options for future development, not to mention the lives of community members.

In most communities during the study period, however, the emphasis was on growth, in some places phenomenal growth. Nevertheless, even among those who saw increased industrial activity as positive, there were hints of ambiguity. For example, in talking about the increased natural gas production activity in south Alabama, a shipyard supervisor observed: "It's good for the economy, it provides jobs, there are a lot of natural resources that it's using, but we worry about too much development. It's an environmental concern" (VP013 2007). Similarly, in Port Arthur, the explosive growth in oil and gas, and its multiplier effect, led one economic development official to raise questions about the adequacy of planning: "I don't think we're ready to deal with the results" (SD01 2007). He discussed schools and child care facilities that were being hurriedly built to accommodate the expected population growth, noting that these developments would be "trying" for the community over the next few years. Ultimately, though, he saw positive things ahead. He emphasized the problems of too much growth too fast, as well as not planning for it, of how companies are coming without the community having to compete for them. But he also emphasized the need for growth. At the same time, as with most other study participants, this individual did not discuss how growth would positively impact the community beyond more jobs, the contribution to tax revenue (though many had incentives that allowed them to pay only a portion of what their taxes would be), or facilitating more growth. Economic developers generally did not talk about the negatives of growth, which in some cases included exposure to industrial pollutants, environmental degradation and increased risk from flooding, and overwhelming the local infrastructure.

There was one consequence of growth that was continually highlighted: lack of adequately skilled local labor to fill jobs. This was not just due to growth, however. A big factor in this was the cyclical nature of the industry sectors that dominated the economic base of these communities. One of the strategies to overcome this problem was to rely on a non-local, mobile workforce. Companies utilized the services of labor contractors so that they could gain access to flexible workforces that could be moved and put to work where needed. As noted above, this appears to be an efficient solution to workforce problems, but there are definite costs to companies, workers, and communities. For communities, these mobile laborers are not invested and sometimes not integrated into the communities in which they are working, and in many cases, at least a proportion of the dollars they earned were being sent back or later spent in their home communities. At the same time, there are arguments that this workforce strategy is cost savings for the communities because they generally do not have to bear the costs of producing and later caring for in their old age these workers. A lingering question is how you maintain a community amidst all this flux. Also, who is responsible for helping communities and the people who live in them so that they are not so subject to shifts in these industries?

5.6. REFERENCES

The Advocate. 1999. Industrial Tax Exemptions Come Under Scrutiny of Miss. Officials. Sunday Advocate. July 25.

The Advocate. 2000. Economic-Development Plan Touted in Miss. The Advocate. August 11.

Alabama Association for Regional Councils. 2002. AARC Development. Internet website: <http://.alarc.org//.html>.

Alabama Development Office. n.d. About Us. Internet website: <http://.ado.alabama.gov///.aspx>. Accessed August 18, 2011.

Alabama Office of Workforce Development. 2004. Home. Internet website: <http://.owd.alabama.gov/>.

Anderson, Ed. 2000. Senate Panel: Drop Break on School Taxes. Times-Picayune. May 27.

Anderson, Ed. 2008. State Expects 6,200 New Jobs. Times-Picayune. Dec. 4. (As cited in Waits 2000 on p. 37) Porter, M. 1990. The competitive advantage of nations. New York: Free Press.

Associated Press. 2004. Moss Point no longer 'The Industrial City.' The Associated Press. April 10.

Ballard, Mark. 2008. Incentives Need Transparency. The Advocate. Nov. 30.

Barnow, Burt S. and Christopher T. King. 2005. The Workforce Investment Act in Eight States. Prepared for the U.S. Department of Labor, Employment and Training Administration. Contract No. AK-12224-01-60. Internet website: <http://.utexas.edu///// Institute Final Report2-10-05.pdf>.

- Blanco, Kathleen Babineaux and John Warner Smith. 2005. Louisiana's Demand-Driven Two-Year Workforce Investment Plan: For Title I of the Workforce Investment Act of 1998 and the Wagner Peyser Act, for the Period of 7/1/2007 through 6/30/2009. Internet website: <http://.laworks.net// WIA PY07 PY09 State Plan.pdf>.
- Bongiorni, Sara. 2000. Governor Cancels Tax Break Plans. *The Advocate*. May 10.
- Bongiorni, Sara. 2002a. Many Say State has Poor Image – Perception Hurts Development Effort. *The Advocate*. Jan. 14.
- Bongiorni, Sara. 2002b. Marketing Strategy Targets Key Sectors. *The Advocate*. Jan. 14.
- Boone, Timothy. 2000. Nissan Will Pay off Tax Breaks, Incentives in Three Years. *The Sun Herald*. Nov. 17.
- Bourdreaux, Anthony. 2008. A message from our president. *Communiqué* 21(11):2.
- Bradshaw, Ted K. and Edward J. Blakey. 1999. What are “Third-Wave” State Economic Development Efforts? From Incentives to Industrial Policy. *Economic Development Quarterly* 13(3):229-244.
- Brenner, Neil. 2002. Decoding the Newest “Metropolitan Regionalism” in the USA: A Critical Overview. *Cities* 19(1):3-21.
- Business Wire. 2000. Mississippi Says Let's Make a Deal. *Business Wire*. Sept. 5.
- City of Moss Point. 2009. This is Your Downtown: The Future of Downtown Moss Point. Internet website: http://.mosspointschools.org/.php?=_content&view=&id=:this-is-your-downtown-the-future-of-downtown-moss-point&catid=:parks-and-recreation&Itemid=.
- City Parish Planning Commission. 2009. Louisiana Enterprise Zone Program Offers Business Tax Credits and Rebates. *Information Bulletin* 19. Internet website: <http://.com/////pdf>.
- Cobb, James C. 1984. *Industrialization and Southern Society, 1877-1984*. Lexington, KY: University Press of Kentucky.
- Cobb, James C. 1993. *The Selling of the South: The Southern Crusade for Industrial Development, 1936-1990*, second edition. Champaign, IL: University of Illinois Press.
- Cox, Kevin R. and Andrew Mair. 1988. Locality and Community in the Politics of Local Economic Development. *Annals of the Association of American Geographers* 78(2):307-325.
- Craig, Amber. 2007. Pascagoula Schools to Lose Out on Tax Revenues if Bill Passes. *The Mississippi Press*. March 29.
- Darce, Keith. 1999. Bills Capture the Attention of Business. *Times-Picayune*. March 28.

- Dougherty, Kevin J. and Marianne F. Bakia. 2000. Community Colleges and Contract Training: Content, Origins, and Impact. *Teachers College of Record* 102(1):197-243.
- Duval-Diop, Dominique. n.d. Louisiana 10-Year Industrial Property Tax Exemption: A Summary of Descriptive Statistics. Internet website: <http://.legis.state.la.us///exempt.pdf>. Accessed August 18, 2011.
- Eade, Deborah. 1997. *Capacity Building. An Approach to People-Centred Development*. UK: Oxfam.
- Editor. 2008. An Emphasis on Retention. Editorial. *The Advocate*. March 3.
- Eisinger, Peter K. 1988. *The Rise of the Entrepreneurial State: State and Local Economic Development Policy in the United States*. Madison, WI: The University of Wisconsin Press.
- Farrell, Lesley. 2001. The 'New Word Order': Workplace Education and the Textual Practice of Economic Globalization. *Pedagogy, Culture and Society* 9(1):57-77.
- Friloux, Kevin M. 1997. Standing Up Against Tax Subsidies for Industries. *Times-Picayune*. May 31.
- Fuhrmeister, Ashley J. 2005. In the Name of Economic Development: Reviving "Public Use" as a Limitation on the Eminent Domain Power in the Wake of *Kelo v. City of New London*. *Drake Law Review* 54(1):171-232.
- Ganapati, Sukumar. 2008. Critical Appraisal of Three Ideas for Community Development in the United States. *Journal of Planning Education and Research* 27(4):382-399.
- Gillette, Becky. 2002. Jackson County Reinventing Economic Development Program. *Mississippi Business Journal* 24(37):16.
- Gresham, Matt. 2003. Louisiana Parish Makes Pitch for new \$50 Million Shipyard. *Workboat* 61(7):16.
- Gresham, Matt. 2004. Bollinger Shipyards Agrees to Expand in Louisiana. *Workboat* 61(2):16-19.
- Gresham, Matt and Ken Hocke. 2003. \$30 Million Offered by Louisiana to Lure Bollinger. *Workboat* 60(8):20-21.
- Griggs, Ted. 1997. Job Cuts Spark Talk of Tax Break Change. *The Advocate*. August 14.
- Grubb, W. N., N. Badway, D. Bell, D. D. Bragg, and M. Russman. 1997. *Workforce, Economic, and Community Development*. National Center for Research in Vocational Education, UC Berkeley. Internet website: <http://.berkeley.edu//.html>.

- Gulf State Shipbuilder's Consortium. 2008a. About Us. Internet website: <http://.gsship.org/ us.html#>.
- Gulf State Shipbuilder's Consortium. 2008b. 2008-2010 Strategic Plan. Internet website: <http://.gsship.org//.pdf>.
- Hall, T., and P. Hubbard. 1996. The Entrepreneurial City: New Urban Politics, New Urban Geographies. *Progress in Human Geography* 20(2):153-174.
- Hansen, Niles M. 1971. Rural Poverty and Urban Crisis. A Strategy for Regional Development. Report Number P-81-19-68-17. Manpower Administration (DOL). Bloomington, IN: Indiana University Press.
- Havens, April M. 2009. Signal approved for deep dry dock. *Mobile Register*. March 14.
- Hocke, Ken. 2006. Chouest to Build New Shipyard in Louisiana. *Workboat* 63(11):18.
- Hocke, Ken and Bruce Buls. 2005. Expansion Team: Shipyards are Using Public and Private Funding to Stay Competitive. *Workboat* 63(3):52-57.
- Holland, Gina. 2000. Miss. Legislators OK Bills for Incentives to Boost Economy. *The Advocate*. August 31.
- Jackson County. 2009. Board of Supervisors. Internet website: <http://.co.jackson.ms.us//of-supervisors/>.
- Jackson County Civic Action Committee (JCCAC). n.d. Jackson County Civic Action Committee : Helping People Changing Lives. About Us. Internet website: <http://.jccivicaction.org//>. Accessed August 18, 2011.
- Jackson County Economic Development Foundation (JCEDF). 2008. Strategic Plan, 2008-2012. Internet website: <http://.org/content//.pdf>.
- Jackson County Economic Development Foundation (JCEDF). 2009. Who We Are. Internet website: <http://.org/.php/jcedf/we-are/>.
- Jacobs, Ronald L. 2002. Understanding Workforce Development: Definition, Conceptual Boundaries, and Future Perspectives. Paper presented at the International Conference on Technical and Vocational Education and Training, Winnipeg, Manitoba, October 17-19, 2002. Internet website: <http://.umanitoba.ca/////pdf>.
- Jeter, Lynne W. 2003a. Regional Development or Political Ploy? *Mississippi Business Journal* 25(15):1-2.
- Jeter, Lynne W. 2003b. Blueprint Focusing on Education, Development, Business Climate: But will the First Broad-Based, Public-Private Initiative of its kind in the State Work? *Mississippi Business Journal* 25(44):29.

- Jeter, Lynne W. 2004a. Lickety-Split: Workforce Training Legislation Speeding Toward Implementation. *Mississippi Business Journal* 26(9):1-3.
- Jeter, Lynne W. 2004b. Gaining Momentum: Education Chiefs Collaborate with Business for Campaign Promoting Higher Ed. *Mississippi Business Journal* 26(10):A13-14.
- Johnson, Bill and Tim Alford. 2007. State of Alabama Workforce Development and Wagner Peyser Plan for July 2007 – June 2008. Internet website: <http://owd.alabama.gov/YrPlan2007-09.pdf>.
- Jopling, John. 2008. Two Years After the Storm: The State of Katrina Housing Recovery on the Mississippi Gulf Coast. *Mississippi Law Journal* 77:873-894.
- Kitchen, Sebastian and Dan Murtaugh. 2007. Incentives to Steelmaker Break State Record. *Mobile Register*. May 12.
- Leicht, Kevin T. and J. Craig Jenkins. 1994. Three Strategies of State Economic Development: Entrepreneurial, Industrial Recruitment, and Deregulation Policies in the American States. *Economic Development Quarterly* 8(3):256-269.
- Lélé, S. 2000[1991]. Sustainable Development: A Critical Overview. *Critical Concepts in the Social Sciences* 6:228-253.
- Louisiana Economic Development. 2009. Enterprise Zone. Internet website: <http://ledlouisiana.com/-programs/zone.aspx>.
- Louisiana Economic Development Council. 1999. Louisiana: Vision 2020. State of Louisiana Master Plan for Economic Development. Internet website: <http://math.lsu.edu/~neubrand/.pdf>.
- Louisiana House of Representatives. Select Committee on Fiscal Affairs. 2001. Final Report. Internet website: <http://louisiana.gov/HTML/PDF>.
- Lush, David. 2004. Blueprint Mississippi Offers a Plan for State to Improve. *Delta Democrat Times*. August 10.
- Lynch, Adam. 2008. HUD, Barbour Under Fire for Diverting Money from Poor. *Jackson Free Press*. Dec. 11.
- McClain, Randy. 2001. Tax Exemptions Criticized. *The Advocate*. August 30.
- McMahon, Bill. 1997. Bill Ties Tax Breaks to Creation of Jobs. *The Advocate*. April 23.
- Millhollon, Michelle. 2008. Work-force bill advances. *The Advocate e-Edition*. Internet website: <http://2theadvocate.com/html?=&c=>.
- Mississippi Business Journal. 2007. Barbour Signs Historic Bills. *Mississippi Business Journal* 29(17):8.

- Mississippi Business Journal. 2008. GO Zone Bond Allocation. Mississippi Business Journal 30(34):B22-23.
- Mississippi Development Authority (MDA). n.d. Business Climate in Mississippi. Internet website: [http://.mississippi.org/.php?="](http://.mississippi.org/.php?=). Accessed August 18, 2011.
- Mississippi Development Authority (MDA). 2007. Mississippi Construction Rebate Program. Internet website: www.sos.state.ms.us////.pdf.
- Mississippi Development Authority (MDA). 2008. Katrina Supplemental CDBG Funds for Economic Development Program, Amendment 4 Modification 2 Partial Action Plan. Internet website: http://.msdisasterrecovery.com/_development/Mod2FinalVer.pdf.
- Mississippi Development Authority (MDA). 2009a. Asset Development Programs. Internet website: [http://.mississippi.org/.php?="](http://.mississippi.org/.php?=).
- Mississippi Development Authority (MDA). 2009b. Asset Mapping Helping Develop Communities throughout State. Internet website: [http://.mississippi.org/.php?="](http://.mississippi.org/.php?=).
- Mississippi Economic Development Council. n.d. Momentum Mississippi: Economic Development Incentive Legislation Proposal. Internet website: www.medc.ms/%%%.doc. Accessed August 18, 2011.
- Mississippi Gulf Coast Community College. 2009. Scholarships. Internet website: <http://.mgccc.edu/ students/ aid/.php>.
- Mississippi Legislature. 2000. Mississippi Code of 1972, as Amended. Internet website: <http://.mscode.com/////htm>.
- Mississippi State Board for Community and Junior Colleges. 2003-09. Workforce Education Division. Internet website: <http://.sbcjc.cc.ms.us/>.
- Mississippi State Tax Commission. 2008. Mississippi: Incentives, Exemptions and Credits. Internet website: <http://.mstc.state.ms.us//.pdf>.
- Mississippi Virtual Public School. n.d. About Mississippi Virtual Public School. Internet website: <http://.mvps.mde.k12.ms.us/html>. Accessed August 18, 2011.
- Mitchell, Garry. 2007. Group to Take Stock of Gulf Fishing Industry. Internet website: <http://.tuscaloosaneews.com/////>.
- Momentum Mississippi. n.d. High Priority Goals for Momentum Mississippi. Internet website: [http://.momentum-ms.org//.asp?="](http://.momentum-ms.org//.asp?=). Accessed August 18, 2011.
- Morgan, Neal. 2007. Jefferson County Tax Abatements. The Port Arthur News. July 30.

National Association of Community Development Professionals. 2005. Cooperative Extension's Community Development Foundation of Practice. Internet website: http://.net/_jan05.pdf.

National Institute of Standards and Technology (NIST). n.d. About MEP. Internet website: <http://.mep.nist.gov/mep/.htm>. Accessed August 18, 2011.

Nelson, Karen. 2009. Shipbuilding Academy is a go. The Sun Herald. Feb. 7.

Newsline. 1997. Lawmakers Okay TOPS. July/August 1997. Internet website: <https://.osfa.state.la.us/.htm>.

Newsline. 1999. Louisiana ACT scores continue to improve: Minimum remains a 20 to qualify for TOPS. October/November 1999. Internet website: <https://.osfa.state.la.us/.htm>.

Northway, Wally. 2004. Workforce Training Revamp Consolidates State, Federal Funding. Mississippi Business Journal 26(8):8.

Office of Community Development. 2008. Office of Community Development. Internet website: <http://.louisiana.gov//.htm>.

Office of the Governor. 2009. Governor Bobby Jindal's Comprehensive Plan to Redesign Workforce Development. Internet website: <http://.gov.state.la.us/.cfm?=&tmp=&cpid=>.

Orndorff, Mary. 2000. Shelby Muscles State into Delta for Federal Aid. Birmingham News. Dec. 20.

Pender, Geoff. 2007. Senate OKs MAEP. Sun Herald. Feb. 14.

Perilloux, Gary. 2007. Megabucks. The Advocate. July 29.

Perilloux, Gary. 2008a. 1,000 Jobs Sweeten Proposal. The Advocate. March 7.

Perilloux, Gary. 2008b. State Now Playing Big. The Advocate. June 25.

Perilloux, Gary. 2008c. Cost to Lure Mill Revealed. The Advocate. April 3.

Perryman, M. Ray. 2006. The Market for Prosperity: Understanding the Economic Development Process. Prepared for the Texas Economic Development Council. Internet website: https://.texasedc.org///%/%_color.pdf.

Poe, Janita. 2001. Fueling the Economy. The Atlanta Journal-Constitution. April 8.

Ports Association of Louisiana. 2005. Port of New Orleans. News from the Docks 6(2):3.

PP010. 2008. Personal communication. History of the development of the shipbuilding industry in Jackson County, MS and personal experiences working in the shipbuilding and fabrication

- industry. Discussion with Preetam Prakash. Retired shipyard worker. Pascagoula, MS. June 23.
- PP029. 2008. Personal communication. Offer the workers new ways that they can better themselves and make more money. Discussion with Preetam Prakash. Human Resources. Moss Point, MS. July 8.
- Pulsipher, Ian. 2008. Evaluating Enterprise Zones. NCSL/Annie E. Casey Partnership on Family Economic Success. Internet website: <http://.ncsl.org///.htm>.
- Randolph, Ned. 2005a. New Leader, New Directions. The Advocate. April 3.
- Randolph, Ned. 2005b. Secretary Reworks Structure of DED. The Advocate. July 20.
- RC060. 2008. Personal communication. Welding education and industrial demand for welders. Discussion with Rebecca Crosthwait. Welding instructor. Harlingen, TX. July 15
- Rebuild Moss Point. n.d. CDBG Katrina Supplemental Projects. Internet website: <http://.rebuildmosspoint.org/.pdf>. Accessed August 18, 2011.
- Redman, Carl. 1997. Tax Incentives Must Benefit the State. The Advocate. August 24.
- Redman, Carl. 1998. Panel Kills Bill to Boost Tax for Schools. The Advocate. May 13.
- Redman, Carl. 2000. Louisiana Workforce Makes Foster Job Harder. Sunday Advocate. March 12.
- Redman, Carl. 2001. House Committee Clears Bill to Tighten Industry Tax Breaks. The Advocate. April 21.
- Rio Grande Empowerment Zone. n.d. Community development. Internet website: <http://.rgvez.org/.php>. Accessed August 18, 2011.
- Rio Grande Valley Empowerment Zone. n.d. Economic Development. Internet website: <http://.rgvez.org/.php>. Accessed August 18, 2011.
- Rosenfeld, Stuart A. 1997. Bringing Business Clusters into the Mainstream of Economic Development. European Planning Studies 5(1):3-23.
- SA01. 2007. Personal communication. Local economic situation and development. Discussion with Diane Austin. University economics professor. Mobile, AL. March 5.
- Sanders, Matthew. 2004. Louisiana Governor Pledges Higher Education a Priority. The Reveille, Louisiana State University, University Wire. April 21.
- Sayre, Alan. 2004. Conference Aims at Helping State Cash in on Cultural Identity. The Associated Press State & Local Wire. Dec. 9.

- SB05. 2007. Personal communication. Local workforce development. Discussion with Diane Austin. Workforce Development Director. Gautier, MS. March 7
- SB07. 2008. Personal communication. Local economic development. Discussion with Diane Austin. Projects Director, JCEDF. Pascagoula, MS. March 13
- SB11. 2007. Personal communication. Local tax and tax incentive policies. Discussion with Tom McGuire. Jackson County Tax Assessor. Pascagoula, MS. November 8
- SB19. 2007. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Tom McGuire. Real estate agency head. Pascagoula, MS. November 12
- SB20. 2007. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Tom McGuire. City manager. Pascagoula, MS. November 13
- SB23. 2008. Personal communication. Local development. Discussion with Tom McGuire. Planning Director, Jackson County Planning Department. Pascagoula, MS. February 12
- SB24. 2008. Personal communication. School district population decreased drastically since the industries left. Discussion with Victoria Phaneuf. Coordinator of Secondary Curriculum. Moss Point, MS. February 12
- SB27. 2008. Personal communication. Describing a discussion with a company comparing incentives. Discussion with Victoria Phaneuf. District One Supervisor. Pascagoula, MS. February 21
- SC11. 2007. Personal communication. Local development. Discussion with Jacob Campbell and Diane Austin. Director of the South Central Planning District. Houma, LA. January 16
- SC17. 2007. Personal communication. Transition to a more diversified economy. Discussion with Diane Austin. Executive Director. Brownsville, TX. July 19
- Scott, Robert Travis. 2003. Investment in Louisiana is Job One, Blanco Says; Governor-Elect Vows to Pursue Business. Times-Picayune. Dec.4.
- Scott, Robert Travis. 2004. Blanco's Pro-Business Speech Lauded by LABI; Governor Details her Plans to Spur State's Economy. Times-Picayune. Jan. 21.
- Scott, Robert Travis. 2005. Economic Agency is getting Makeover. Report Faults System for Bringing in Jobs. Times-Picayune. Feb. 6.
- SD01. 2007. Personal communication. Renewed focus on community development. Discussion with Diane Austin. CEO. Port Arthur, TX. June 4
- SD02. 2007. Personal communication. Local economic development. Discussion with Diane Austin. Executive director of county economic development corporation. Orange, TX. June 4

- SD08. 2007. Personal communication. Local economic development. Discussion with Jason Theriot and Diane Austin. Chairman of the chamber of commerce. Port Arthur, TX. June 6
- SD09. 2007. Personal communication. Local economy and businesses. Discussion with Diane Austin. City of Orange, City Manager. Orange, TX. June 6
- SE07. 2007. Personal communication. Local economic development. Discussion with Diane Austin and Tom McGuire. Consultant, Port Industries of Corpus Christi. Corpus Christi, TX. July 13
- SE10. 2007. Personal communication. Fabrication industry. Discussion with Diane Austin and Tom McGuire. City manager. Ingleside, TX. July 16
- SF13. 2008. Personal communication. Local economic development, workforce, offshore oil and gas industry. Discussion with Diane Austin. Assistant City Manager, Economic Development Administrator. Port Isabel, TX. July 18
- SF14. 2008. Personal communication. History of area, local news and industry. Discussion with Diane Austin. News reporter. Port Isabel, TX. July 18
- Shaw, Kathleen M. and Sara Rab. 2003. Market Rhetoric Versus Reality in Policy and Practice: The Workforce Investment Act and Access to Community College Education and Training. *The Annals of the American Academy of Political and Social Science* 586:172-193.
- Sigo, Shelly. 2007. Mississippi: Gov. OKs \$3.5B for Schools. *The Bond Buyer* 360(32618):9.
- Smith, Kimberly E. 2008. The GO Zone Act: An Innovative Mechanism for Promoting Economic Recovery for the Gulf Coast. *The Mississippi Law Journal* 77(3):807-842.
- Smith, Mark K. 2006 [1996]. Community Development. *The Encyclopaedia of Informal Education*. Internet website: <http://.infed.org//comdv.htm>.
- South Central Industrial Association. n.d. Committees. Internet website: <http://.sciaonline.net/.asp>. Accessed August 18, 2011.
- South Central Planning and Development Commission (SCPDC). 2006. Programs. Internet website: <http://.scpd.org// Programs.aspx#EcoPlan>.
- South Louisiana Economic Council (SLEC). 2008. Louisiana's Bayou Region: Growth, Prosperity... A Way of Life. The Strength of a Regional Approach to Economic Development. Internet website: http://.edsuite.com// 264/ strength_of_regionalism_fi_159.pdf.
- State of Mississippi. n.d. State of Mississippi Strategic Plan Modification Program Years 2007 and 2008. Internet website: www.mdes.ms.gov// 1_0_CH///.pdf. Accessed August 18, 2011.
- State Scholars Initiative. 2009. Background Facts and Figures. Internet website: <http://.wiche.edu///.aspx>.

- Steps. 2009. Has Mississippi Fallen Further Behind? Trends and Challenges in Mississippi's Disaster Recovery. Internet website: http://.stepscoalition.org/////4_report.pdf.
- Storper, Michael. 2005. Society, Community, and Economic Development. *Studies in Comparative International Development* 39(4):30-57.
- Times-Picayune. 2000. Change of Heart on Taxes. *Times-Picayune*. April 17.
- Turner, Robert C., and Mark K. Cassell. 2007. When Do States Pursue Targeted Economic Development Policies? The Adoption and Expansion of State Enterprise Zone Programs. *Social Science Quarterly* 88(1):86-103.
- U.S. Department of Commerce. n.d. Comprehensive Economic Development Strategies (CEDs): Summary of Requirements. Internet website: http://.eda.gov//_Flyer_Wht_Background.pdf. Accessed August 18, 2011.
- U.S. Department of Labor. Employment and Training Administration. 2009. Adult Services. Internet website: http://.doleta.gov//_info.cfm.
- U.S. District Court. 2008. MS State Conference NAACP, Gulf Coast Fair Housing Center vs. U.S. Department of HUD. Internet website: http://.jacksonfreepress.com/////Complaint_as_Filed.pdf.
- U.S. Government Accountability Office. 2006. Empowerment Zone and Enterprise Community Program: Improvements Occurred in Communities, but the Effect of the Program is Unclear. Report to Congressional Committees. GAO-06-727. Internet website: <http://.gao.gov/.items/.pdf>.
- U.S. Government Accountability Office (GAO). 2008a. Workforce Development: Community Colleges and One-Stop Centers Collaborate to Meet 21st Century Workforce Needs. Internet website: <http://.gao.gov/.items/.pdf>.
- U.S. Government Accountability Office (GAO). 2008b. Gulf Opportunity Zone: States are Allocating Federal Tax Incentives to Finance Low-Income Housing and a Wide Range of Private Facilities. GAO 08-913. Internet website: <http://.gao.gov//.html>.
- U.S. State News. 2006. Gov. Barbour Issues Proclamation to Members of Legislature. *U.S. State News*. August 22.
- U.S. State News. 2007. Gov. Barbour Issues Proclamation to Convene Legislature in Extraordinary Session. *U.S. State News*. April 25.
- Valcourt, Josee. 2004. Gov. Activates 1987 Act. *The Clarion Ledger*. August 10.
- VP009. 2007. Personal communication. Elevated high school dropout rates. Discussion with Victoria Phaneuf. Reporter, Local newspaper. June 28.

- VP013. 2007. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Victoria Phaneuf. Production supervisor. Grand Bay, AL. July 8
- Waits, Mary Jo. 2000. The Added Value of the Industry Cluster Approach to Economic Analysis, Strategy Development, and Service Delivery. *Economic Development Quarterly* 14(1):35-50.
- Wallace, Barbara, James Kirkley, Tom McGuire, Diane Austin, and David Goldfield. 2001. Assessment of the historical, social, and economic impacts of OCS development on Gulf Coast communities; Volume II : Narrative Report. Prepared by TechLaw, Inc. OCS Study MMS 2001-027. U.S. Dept. of the Interior, Minerals Mgmt. Service, Gulf of Mexico OCS Region, New Orleans, LA.
- Wardlaw, Jack. 2000. LA Group Campaigns for Better "Quality of Life." *Times-Picayune*. April 19.
- Wilder, Margaret, and Barry Rubin. 1996. Rhetoric Versus Reality: A Review of Studies of State Enterprise Zone Programs. *Journal of the American Planning Association* 42(4):473-91.
- Wilkinson, Kaija. 2009. Mississippi plans training center near Ingalls. *Mobile Register*. Feb. 7.
- Wilson, D. Mark. 1999. Time to End the Troubled School-to-Work Program. The Heritage Foundation. Internet website: <http://.heritage.org///.cfm>.

6. RISK AND RESPONSIBILITY

6.1. INTRODUCTION

Work in fabrication, shipbuilding, and ship repair is inherently risky. Work is managed and performed in discrete physical spaces and locations on the fabrication yard, shipbuilding or repair yard, and the machine shop floor, or during platform installation and maintenance. The workplace environment is rife with physical and material threats both because of adverse working conditions and the inherently dangerous jobs workers perform under these conditions, all on a daily basis. Workers face these risks whether involved in the assembly of boats or platforms, repair or refurbishment of critical or non-critical steel structures, or the construction and installation of rig or platform components. Worker safety programs, health and safety regulations, techniques and practices of workforce discipline, and the insurance products and regulations that govern both worker and employer are all important for those doing business in this industry. Workers, managers, and owners must be ready to deal with any or all of the issues that affect their work practices on any given work day.

Workplace safety and the public and private insurance systems that are designed to help manage and mitigate risks are critical to the ongoing existence and functioning of the shipbuilding and fabrication industry in the Gulf of Mexico. Fundamentally, companies cannot operate without at least liability insurance, and insurance practices, which include estimating risk and tracking safety records, are linked to many aspects of the industry, and in particular the opportunities to bid on major projects. In short, the day-to-day operations of yards and facilities, which include routines related to safety, as well as the continued viability of the industry, depend on effective management of risk to workers, and the perception of those risks. Failures in safety and worker protection, or in regulations that underlie these practices, could destabilize the industry if it were believed workers were not adequately protected, or if companies went out of business due to failure to acquire insurance or the imposition of very large punitive damages. In the ongoing negotiations between employers and employees, the management of risk occupies a central place as incentives for employers to have low occupation-related injury and illness rates within their workplaces lead to policies and practices that require trade-offs in the costs and benefits to individuals, companies, and the industry as a whole.¹

Yet a number of discussions with study participants indicate a great deal of variability in how workplace safety is addressed, how closely regulations are followed, or how diligent workers or managers are in reporting accidents or safety incidents. Workforce dynamics, such as safety bonuses, as well as economic issues, such as the impact of safety ratings on contract bid eligibility, may lead workers to not report accidents or management to discourage such reporting (see below, for additional discussion). Additionally, in this study, managers expressed some confusion as to what regulations or insurance products were applicable or required in a given vocational context (e.g., over water vs. near water), along with considerable frustration when sanctions were levied against their company for not following these regulations (knowingly or unknowingly). Finally, a number of workers and managers have worked in this industry for decades and have seen considerable changes in workplace conditions, the way safety is

¹ This chapter was written before the *Deepwater Horizon* drilling rig explosion killed 11 offshore workers on April 20, 2010.

monitored, and the perceived level of government regulation present in a given workplace. Among respondents there was no consensus on the effectiveness of the regulations. There was, however, some degree of consensus regarding this assemblage of factors (i.e., safety regulations, changing safety practices, the politics of incident reporting, and insurance regulations) and how it impacted a company's ability to operate in this industry. Namely, respondents generally agreed that while these regulations were designed and implemented with good intentions, not all were productive in changing workplace habits or increasing workplace safety.

This chapter focuses on the threats to personal or physical safety that workers face in this industry; the regulations designed to encourage or require a worker protection framework in vocational settings such as fabrication and shipbuilding facilities, ship repair yards, machine shops, and offshore installation operations; and the worker and company strategies designed to mitigate safety risks/threats, including official and unofficial responses or reactions to rules and regulations. It is particularly important to consider how expressed concern about worker safety may also reflect underlying concerns about the industry, such as concerns with foreign or migrant labor, or perceived poor workplace habits, laziness, and apathy within communities of workers, or hostility or confusion over federal regulations. The goal of this chapter is to document the complex factors that affect worker and workplace safety, the regulations designed to protect workers, the insurance products and minimum coverage required of a company in order for it to operate, and deviations from idealized or standardized practices during the everyday operation of fabrication and shipbuilding facilities, ship repair yards, and other similar vocational contexts.

The sections that follow include a brief literature review and discussion on the underlying concepts of risk and insurance, the general laws and regulations designed to protect workers and ensure a safe workplace (e.g., the Occupational Safety and Health Act (OSHA) and workers compensation), and a site-specific discussion of regulations that apply to the fabrication, shipbuilding, and ship repair yards (e.g., longshoreman's workers compensation and Jones Act compensation rules and regulations). These sections also integrate examples from fieldwork conducted from June 2007 to January 2009 to show a broad range of ways that OSHA regulations and maritime workers compensation insurance affect the fabrication and shipbuilding industries. These examples document consistent and emergent themes encountered at the time of field data collection, and include: uncertainty and confusion surrounding regulations, incomplete or inconsistent application of rules, and factors that contribute to difficulty implementing or adhering to these rules on the part of worker *and* employer. The examples also include numerous instances of worker skepticism regarding the necessity or importance of some of the regulations and safety practices, or managerial-level resistance or hostility towards these regulations. They detail the practical realities or potential difficulties that workers or managers face when dealing with workplace safety, risk management, and workplace behaviors in the fabrication, shipbuilding, and ship repair industries.

6.2. RISK, INSURANCE, AND RESPONSIBILITY

While a number of authors have addressed the topics of risk and insurance in much greater detail, it is useful to revisit the underlying concepts before addressing worker safety and the federal regulations and outcomes that are specific to the fabrication and shipbuilding industries. Given the risks that workers, managers, and company owners face in the fabrication and shipbuilding and repair industries, it would be untenable for any one company to bear the financial, material, or social burden of mitigating these risks at an individual worker or company

level, or for an individual worker to bear the costs of his or her own safety protection. This is especially true given the practical reality that many of these risks are chance events that rarely affect everyone (e.g., the geographic impact of a hurricane) or all workers (e.g., a workplace accident that injures a small percentage of the workers on the yard). This concept of pooling or socialization of risk has been addressed in numerous historical and social science forums (cf. Beck 1986; Ewald 1991; Lupton 1999), but in general scholars address the uniquely social choices that humans make regarding their participation in a system from which they may or may not draw any benefit, namely the system of insurance.

6.2.1. Insurance

The provision of insurance in the United States has gone through numerous institutional and operational iterations, ranging from government-sponsored (e.g., Medicare, veterans benefits) to private and profit-driven (e.g., any number of private insurance products, including health, property, term life, and auto), but all operate in a similar pattern, whereby the insurance providers gather a set of shared resources from a group of individuals, companies, or institutions, and use these pooled resources to mitigate the impacts of negative events for the limited number of claimants who experience them. Both the risk to the insured population and the cost of providing the insurance are shared across the entire population. This forms a type of social agreement, whereby those who need the benefits of the system will receive them, and those that do not can rest assured that resources were available had they been needed. Many municipal or social institutions operate in this way. For example, few can afford a private police or fire protection force, but all benefit from the system's existence when they are in need of such a social institution. The system is beneficial in that costs are diffused across the population, and the benefits are available, at least in theory, to all members of the population.

While a system of insurance that pools both risks and resources is in many ways ideal, since it ensures that more resources are available to any one participant than that individual member could realistically marshal on his or her own, it is also subject to abuse, on the part of both the claimants trying to receive benefits, and the insurance providers of whom these benefits are being requested. At an official level, claimants may make insurance claims that are fraudulent, or exaggerate or overestimate the damages or impact that a particular short term event or long term condition has on them or their body, property, facility, or company, or they may try to claim damages or compensation under a policy or regulation for which their loss (real or otherwise) does not fall. Insurers, and in particular those that are privately run on a for-profit basis, may be motivated to deny claims that are otherwise legitimate, or exclude clients on the basis of elevated risk levels, since to pay claims or provide coverage is to accept the risks or costs of each of those included. And at an unofficial level, workers or company managers may be encouraged or coerced into under-reporting violations or hazards, on the basis of any number of possible benefits or sanctions (see below). Further, a significant problem arises when attempts to draw on the benefits exceeds what had been put into the system.²

²These potential abuses and the potential resulting breakdown of an insurance system illustrate what Garrett Hardin referred to when he wrote of the tragedy of the commons (Hardin 1968). While his emphasis focused on how a shared natural resource is negatively impacted by misuse or overuse, we can apply this concept to socialized or pooled risk, and the insurance system that underwrites these risks, as a social resource that is subject to the same sorts of use and exploitation. A single illegitimate claim, denied coverage, or encouraged/coerced non-

(continued)

6.2.2. Risk

Work in fabrication or shipbuilding yards, as well as work in related industries such as general steel fabrication and machining, ship repair, tank and barge cleaning, or salvage and retrieval operations, are all extremely dangerous vocations. The Occupational Safety and Health Administration (OSHA) has cited shipyards for violating a myriad of standards involving cranes, derricks, portable fire extinguishers, ventilation and protection in welding, woodworking machinery requirements, and many more. This constitutes an impressive list of potential fates, and one that grows when the offshore work associated with post-construction installation, operation, or maintenance of the infrastructural components is included. In sum, every operational step in the process that transforms a pile of plate steel into an operating platform, vessel, or infrastructural component, is associated with a number of inherent occupational risks and threats. These range from acute exposures and incidents that occur as part of the everyday life of work on the fabrication and shipyards, to longer-term chronic conditions that result from accumulated exposure to hazards such as chemicals, welding arcs (vision), or literally deafening noises; or the cumulative effect on the body over a lifetime of strenuous and physically demanding physical labor. For much of the workforce, these risks, especially the acute and immediately-impacting risks, such as risk of falls, burns, or explosions, are relatively well-known and if not accepted, at least tolerated. Some of the long-term conditions (e.g., asbestosis or chronic pain) may be less well-known, documented, or easy to trace, so even though some workers and managers understand that these are consequences of working in this industry, they seem to occupy a less prominent position in the minds of workers in the industry (see discussion below).

But systematic risks in the workplace cannot be (and have not been) left to workers and companies to decide the appropriate protections on a case-by-case basis. The federal government has much at stake in the health and safety of the nation's workforce. Labor is important for the circulation and production of goods and state power on a global scale. The labor pool is also made up of citizens to whom the state has certain responsibilities and obligations. Increasingly, the worksite also serves as a primary site for disputes over adult health; it is a site where U.S. workforce data is collected, where workers' health is managed, and where workers make claims on rights to safety and health provisions. The tactics that are involved in occupational health and safety (OHS) thus affect the state's survival, limits, and vitality. Discourse concerning OHS regulations touch on state limits in business and worker rights and entitlements (e.g., the limits that the state can place on the risks that workers are "willing" to take). It is also a site where inequalities and power relations can be studied through a focus on the struggles that take place around work and health (Susser 1988; Walters 1985).

6.2.3. Responsibility

U.S. government regulation of OHS began in the late 19th century, on a state-by-state basis (MacLaury 1981). Significant federal government authority to set standards for worker health and safety and penalize companies for willful violation of said standards was not a reality until the late 1950s. Comprehensive centralization of the Department of Labor safety programs came under President Nixon with the passage of the Williams-Steiger Occupational Safety and Health

claim/adherence does little to affect the overall pool of resources, but a series of systematic abuses eventually undermines the framework of the system, as resource debits begin to exceed the inputs into the system.

Act (OSH Act). The OSH Act established the Occupational Safety and Health Administration (OSHA), which is primarily charged with setting standards, conducting worksite inspections, and enforcing those standards (MacLaury 1981). The act also established the National Institute for Occupational Safety and Health (NIOSH) to conduct OHS research, along with educational programs (Hudock et al. 2001). Additionally, the OSH Act required the Bureau of Labor Statistics (BLS) to collect data on injury and illnesses using definitions established by OSHA. Since its inception, OSHA has been quite controversial. Some critics say that it makes businesses incur needless costs (OSHA as “onerous ogre”) while others claim it does not have enough authority, conducts few actual inspections, and imposes relatively low fines on violators, and so cannot meet its goals (OSHA as “toothless tiger”) (Weil 1996). Thus, at least on the surface, OSHA can be seen as balancing business interests for production cost reduction with protection of worker rights for health, and the costs associated with poor worker health.³ Here we review aspects of OSHA using examples from the yards and communities that were the focus of this study.⁴

In addition to setting and enforcing workplace safety standards, the U.S. federal government has established workplace insurance laws, and these are subject to both debate and confusion. Safety practices are, for the most part, designed to reduce the risk of accidents, and to train people so they know what to do if an accident does occur. Insurance is formulated with the assumption that some accidents and negative events *will* happen, and that an employer must have adequate coverage to cover all potential liabilities. As documented above, in a fabrication or shipbuilding facility or on a shipyard, the list of potential liabilities is quite lengthy. In addition, there are a number of other insurance products required beyond those associated with workers. After ending a phone call, a fabrication yard manager told a member of our research team, “that was the insurance lady”, and subsequently listed the ways that insurance affects his business.

Insurance is a big thing—you have to be covered from every end...we have marine liability, workers comp, longshoremen's insurance, maritime liability, boat coverage, just tons of insurance. And this agency can handle these big policies. Some agencies just write and forget about you, and the agent they have now is really proactive about things that are going on. We are usually involved in all sorts of lawsuits, so we need that insurance....No one [type of] insurance covers everything...there is overlap between the different policies, but we need lots of different ones, as well as an umbrella policy that covers everything. Insurance is quite a game, but when you have it, you're happy that you did. (BM013 2008)

³ Estimates of the costs associated with poor OHS vary. Through a meta-analysis of literature and government reports, Schulte (2005) recently estimated that each year there are about 55,000 deaths and 3.8 million disabling injuries that occur in the workplace. Costs associated with this range from \$128-155 billion each year. However, he argues that this figure is probably an underestimate due to extensive underreporting, long latencies between exposure and illness, and various other factors that muddle understanding of the burden of occupational disease and injury.

⁴ Notably, shipbuilding, ship repair, and ship recycling have had historically higher injury and illness incidence rates than general industry (Hudock et al. 2001). As such, this industry has been a special focus for OSHA efforts. For example, there is an online “e-tool” that describes in detail common hazards and potential solutions to ship repair processes. Additionally, there is a whole host of standards that have been explicitly designated as being applicable to this industry (see OSHA regulations 29 CFR Part 1915).

This quote details a larger issue related to workforce and company management in the fabrication, shipbuilding, and ship repair industries, namely the incredible plethora of potential liabilities and the insurance products required to mitigate these liabilities. And while property and loss mitigation are important components of these business operations, this chapter focuses on the safety regulations and insurance products specific to workers and the workplace, such as general workers compensation, as well as maritime-specific coverages.

The workers' compensation (WC) system operates alongside OHS laws. The WC is an insurance fund to which employers must contribute in order to compensate workers who become ill or injured because of their job (Fishback 2001). It makes employers liable for job-related injuries and accidents regardless of fault (Biddle et al. 1998).⁵ Like with OHS, states led the way in enacting WC laws in the early 20th century. In 1908, under Theodore Roosevelt, the first federal policy was created; it covered federal employees (MacLaury 1981). Since the middle of that century, all states have enacted WC laws, which vary in different ways from one another. One of the major concerns for employers is the cost of WC insurance. The premiums that employers must pay for this insurance have grown annually since 1939, due in part to the increasing cost of medical care. For individual employers, premiums can rise in association with risks facing employees, as well as with experience of injuries and disease within a company (i.e., experience rating). WC rates are important in company competitive bidding processes and have been theorized to be an important incentive for companies to provide safer working environments (Butler 1991).

The needs (and costs) of the maritime industry meant that, in some cases, the general workers compensation coverage levels may be insufficient, or may not accurately reflect the risks that maritime workers face. A number of legislative acts were enacted to establish a system of workers compensation that addressed the unique circumstances surrounding work over-water and in maritime and related environments (see Box 6.1), such that in addition to the general protections and regulations under state-run workers compensation rules, laws, and safety protocols, there are "site-specific" laws regarding insurance levels and safety regulations that must be maintained for certain types of work related to marine or over-water employment. These added protections and regulations are relevant to a study of fabrication, shipbuilding, and ship repair, since much of the work is conducted directly on or near water, or the products, installation, or transport, even if considered as taking place "off-site", involve over-water or near-water contexts.

The over/near water designation is one of the primary characteristics that shift worker protection from standard workers compensation to Longshoreman's and Harbor Workers Compensation (LHWC) or Jones Act coverage categories and compensation levels. The relevance of these regulations, and in particular the added impact they have on the operational capacity and scope of companies operating within the fabrication and shipbuilding industries, became apparent when a labor contractor informed a member of the research team that she would not place workers (mainly welders or fitters) onto shipyards, because the work involved

⁵ See Ewald (1991) for a discussion of the ways in which insurance is a practice of rationality that act through the calculus of probabilities to objectify all events as an accident. This work is productive in that it creates risks while also assigning values to certain events. Notably, but outside the discussion of this particular study, injuries and illnesses that are incurred on the job carry social costs that cannot be easily translated into economic compensation (cf. Beardwood et al. 2005; Dembe 2001).

“over-water” context, and the insurance associated with this added risk was prohibitive (SD015 2007).

Box 6.1. Brief History/Timeline of Relevant Legislation & Revisions

Jones Act (1920)

For the purposes of this discussion, the Jones Act (also known as the Merchant Marine Act of 1920, and subsequently codified in 2006 to formalize the rights of seaman that had been in place since the 1920 act) provides protection to seamen and provides a means by which injured seamen can claim financial compensation from their employers for negligence that occurs on any part of the vessel, and by any member of the crew, including captain, as well as the owner of the ship itself (46 U.S.C. § 688, 1920; 46 U.S.C. § 30104, 2006). This designation of negligence is important, in that unlike standard workers compensation (or Longshore and Harbor Workers Compensation), there must be demonstrated negligence (including un-seaworthiness), for a Jones Act claim to proceed. There are a number of other regulations associated with the Jones Act, but for the purposes of our focus on safety and insurance, this is the relevant piece of that law.

Longshore and Harbor Workers Compensation Act (1927)

The Longshore and Harbor Workers Compensation Act (33 U.S.C. §§ 901, 1927) was passed in 1927 and provided redress for a variety of injuries that might occur while land-based maritime workers were on the job. The law provides injury compensation and medical benefits to employees that are injured, disabled, or are killed while working "on navigable waters" of the United States (cf. Fuge, 2000). Fuge (ibid.) documents three major problems with the law, and for the purposes of our chapter, the most important issue surrounded confusion over the criteria to use in determining whether LHWCA coverage or state workers compensation coverage was the appropriate rubric for a given event.

LHWCA Revisions (1972 & 1984)

The 1972 revision to LHWCA finally provided some guidance on the aforementioned confusion regarding coverage categories, most importantly, by establishing what were designated as the "status" and "situs" tests for the law, and secondarily, by increasing the benefits available under LHWCA compensation compared to state workers compensation levels. The *status* portion of the regulation designates who is covered by the LHWCA, namely any employee that is engaged in work "over water" or in maritime employment, while the *situs* expanded on the definition of the physical location whereby the work had to occur to be covered under the act. The 1972 revision was generally conceived as implementing a too broadly designated *status*, such that the 1984 revision primarily sought to establish a list of employees who would be excluded under the LHWCA (cf. Fuge 2000).

Outer Continental Shelf Lands Act (1953)

The primary purpose of this act (as it is relevant to this chapter) was to extend the LHWCA coverage to any worker working on the outer continental shelf on fixed structures that would otherwise not be covered under Jones Act regulations, but whose job responsibilities and risks were such that LHWCA was both appropriate and necessary.

Additionally, numerous participants indicated varying degrees of understanding regarding how these laws were applied, which laws were appropriate for a given workplace or vocational context, and what coverage levels were required for certain types of employment (especially maritime, but including over and near water as well). However, the law is quite specific regarding which rubric a given employee would fall under, as the Department of Labor's Longshore Benchbook (a handbook for judges hearing Jones Act and LHWCA cases), makes clear:

When considering the concept of "coverage" under the Longshore and Harbor Workers' Compensation Act (LHWCA)...it must be kept in mind that employment is best thought of as a linear continuum with three major groupings. First, there will be situations where the employment will not be considered "maritime" at all, and therefore, not covered under the LHWCA. (Such employment would more properly be covered under a state workers' compensation system.) Second, there will be the situation where the claimant is a longshore/harbor worker or other "maritime" worker and, thus, is clearly covered under the LHWCA. Third, there will be situations where the employment is maritime in nature, but the worker is more properly classified as a seaman attached to a vessel and entitled to a recovery under the Jones Act (Merchant Marine Act). (Dept of Labor 2002:1.1)

Importantly, these two acts are mutually exclusive. Thus, when dealing with a "water-based" (as opposed to "land-based") LHWCA claim, it must be determined if the claim falls within the criteria of LHWCA coverage, or belongs more properly under the Jones Act. (Dept of Labor 2002:1.4.1)

Yet not everyone within the study communities had the same level of awareness about the regulations, and many told stories of confusion surrounding the applicability of certain laws, and more commonly, a perception that these laws were particularly subject to abuse at the hands of workers or were part of further and unneeded or gratuitous governmental interference or intrusion into companies' operations (see examples in the next section).

For the fabrication and shipbuilding industry, more important than confusion over the LHWCA or Jones Act is the establishment of the *situs* and, secondarily, the *status* designation. While the *status* designation is relatively clear, the *situs* designation is one that gives management fits in determining needed coverage levels.⁶ The original 1927 Jones Act designated *situs* as over (navigable) water, including docks, piers, barges, moored vessels, and ships undergoing repairs. All of these contexts are obviously maritime in nature, and if they involve a vessel, that vessel is not "in navigation," which excludes it from Jones Act coverage. However, there are a number of potentially maritime-related activities that take place over land

⁶ While it appears fairly clear which schema a given employee would fall under based on the wording of the law and the mutual exclusivity of the coverage, the technologies used in the Gulf Coast offshore industries (floating and fixed platforms, mobile dry docks, stationary drilling rigs, drillships) mean that there is room for considerable confusion as to which should actually apply, as the definition of "vessel" from the LHWCA demonstrates:

The jurisprudential definition of "vessel" has come to include, but not be limited to ships, barges, drilling barges, jack-up rigs, submersibles, and semi-submersibles. Note, these last three are not fixed platforms, rather they are floating structures, or structures capable of flotation. 33 U.S.C. § 902(21).

This potential for confusion stems in part from the fact that the LHWCA's *situs* designation does not draw solely on purpose (e.g., drilling) in designating which coverage is appropriate, but rather the mechanism by which the structure moves (or fails to move). Again, the designation is still relatively clear, as the law uses the criteria as to whether the vessel/platform was "in navigation" at the time of injury to determine the appropriate coverage. The LHWCA vs. Jones Act section of the Handbook (Dept of Labor 2002) is quite helpful in extended explanations regarding different case laws and decisions, but for the purposes of the fabrication and shipbuilding industries, very little of the work conducted within this industry would fall under Jones Act, although nearly all of it (excluding some clerical or management tasks), falls under LHWCA. However, given the increased compensation levels and coverage limits, workers are motivated (financially or otherwise) to claim injury compensation and benefits under Jones Act law if at all possible (again, cf. Dept of Labor, 2002 for extensive examples of various attempts).

which could be construed as maritime-related, and in 1972, the *situs* designation was extended to include "adjoining areas" that housed these "over land" maritime-related activities. This shift in *situs* was based on:

(1) the suitability of the site for maritime purposes, (2) the use of adjoining properties, (3) proximity to the navigable waterway, (4) whether or not the site is as close to the waterway as is feasible, given all of the circumstances. (U.S. Department of Labor 2002: 1.6.2)

Subsequent jurisprudence was "more concerned with a 'functional relationship' than it was with physical contiguity" (Dept of Labor 2002: 1.6.2), and further extended this designation so that the term "adjoining" not only referred to contiguous or bordering land, but land that was "close to" or "near" the relevant property. The casebook goes on to state:

So long as the site is close to or in the vicinity of navigable waters, or in a neighboring area, an employee's injury can come within the LHWCA. (U.S. Department of Labor 2002: 1.6.2)

This expanded definition and the subsequent jurisprudence that supports the extended spatial extent of the *situs* designation affects the fabrication and shipbuilding industries in several ways. First, maritime-related fabrication, even if it takes place at an ancillary location that is not immediately adjacent to a waterway property with waterfront access, can be designated via the *situs* clause of the LHWCA, and specifically with the 1972 revision. This means that machine or propeller shops, specialty fabricators, or other ancillary businesses fall under the heading of LHWCA, and can be sued under the act. A second issue is the relatively fuzzy nature of the regulations regarding *situs* for the LHWCA, in conjunction with the added cost of providing such coverage to workers. A fabricator may believe that his shop is immune to the LHWCA regulations for insurance and may suffer no consequences until an employee is injured and seeks compensation under the LHWCA, at which point the lawsuit and possible fines can quickly get quite expensive.

To reiterate, while the particular laws are relatively clear in terms of which particular rubric a given company or employee would fall under, the confusion and uncertainty about the fuzzy border between the classes, in conjunction with the added costs of providing this level of coverage (compared to standard workers' compensation) means that some employers may purchase more coverage than is necessary, adding unneeded costs to their operation, while others may carry too little coverage, opening themselves up to lawsuits, fines, or other mitigation to remedy the lack of coverage.⁷

⁷ A final point might be to ask why any employee might seek to obtain compensation or benefits that differ from those that their employer has provided. The simple answer is that LHWCA coverage benefits are much more than standard workers compensation (as per the 1972 LHWCA revisions), and Jones Act benefits are a great deal more than those of LHWCA. Given the fuzziness of the categories, if an employee can prove that what they were doing constituted work that was one level up on the continuum from the coverage levels, he can obtain significantly higher benefits. A few of the ethnographic examples show how managers feel about this type of litigation.

6.2.4. Examples

As suggested, these specific laws, which govern the level of coverage for workers, can impact the choices that companies make regarding their business strategies, as the costs of certain types of work can be prohibitive.

We do welders, fitters, helpers, and blast and paint guys...and this is primarily all for onshore...With onshore, you're protected by workers compensation insurance, but with offshore it's linked to the Jones Act and people can sue, and the liability is not limited. (BM139 2008)

In this case, the cost of insurance and the potential costs of lawsuits served as a deterrent to getting into any sort of offshore labor contracting. But in other instances, local labor contractors would not even consider doing placement for local shipyards since it involved “over water” *situs*, and the company presidents argued they could not afford the additional insurance costs associated with LHWCA coverage levels. Some employers also reported that employees routinely took advantage of the compensation system. Notably, similar discourses about worker abuse of the worker compensation systems are prevalent in the popular media (e.g., Good Morning America 2006). Despite such widely held beliefs, studies have shown that in general there is remarkable underreporting of work-related injuries and illnesses to worker compensation systems (Biddle et al. 1998; Fan et al. 2006; Rosenman et al. 2000). In fact, workers often have to struggle to have injuries legitimized by employers and insurance systems (see discussion below).⁸ However, in discussions with persons in this industry, a subset of workers was described that were particularly industrious and focused on gaming the system:

You have what you call a “dollar collar” around here [a neck brace]—and you have a lot of people who are just waiting on their settlement.... Do you know what a “zipper” is? It's when you get a little operation on your back or neck to get a zipper [scar] so that your claim is more likely to go through. And with workman's comp you have a limit and most people reach a settlement pretty quickly, but with Jones Act, there is no limit, so things go on (BM059 2008).

Whether this anecdote is based in reality is not particularly relevant to this chapter. What is interesting is the way that stories of systematic fraud persist within the management ranks, which are the same people who are well aware of the costs of this insurance, and the very real possibility of a lawsuit that draws on these insurance laws. The persistence of these stories may very well reflect more upon the frustrations with the laws, and the confusing, fuzzy, boundaries between the different levels of coverage.

⁸ For example, a former industrial mechanic for a multi-national oil company said that following an on-the-job back injury, he was sent by his company to multiple doctors over the course of four years. During that time, he would try to return to work, but his condition deteriorated until he reinjured himself. Following back surgery, he was allowed to return to work for the company as a dispatcher, which he described as the company's attempt to dodge responsibility for his condition. He had been told by the company that if he attempted to return to his previous condition and reinjured himself a third time he “might” not have any job. A year and a half later he was fired after having worked for the company for 13 years (HG008 2007).

Employers and managers were not the only study participants concerned about inconsistent application of these laws. In the following example, the yard owner focuses on an "activist liberal" judge, whom he feels is "legislating from the bench", two phrases that are also commonly heard on conservative talk radio.

We end[ed] up paying longshoreman's workman's comp—partly because of where he [the worker] was, but mostly because there aren't any businesses between us and the water—even though there is a street, a seawall, a park, and a wharf in between us and the water. They came and looked at the "site states" [*note: this refers to situs and status*]... and because we do marine-related equipment, we were in a grey area...And the end result, it's not about paying or not—it's that these actions are not in keeping with the law—at least as it was intended. So now, our insurance has tripled because we are "over water" [sic: adjacent to water] (BM134 2008)

Clearly, an underlying concern is the frustration the owner feels over confusion regarding the appropriate insurance product that he needed to have purchased for his shop. As discussed above, the LHWCA law is quite clear regarding who should be included under this statute, and this shop would definitely qualify under LHWCA criteria, but the issue is how this becomes a conflict over perceived government interference in the private sector, and how it is limiting that sector's business and growth. This may be a valid concern on the part of the owner, but the frustration over the insurance coverage does little to address this.

6.3. SAFETY RECORDS AND INCENTIVES

As with general calculations of risk, and specific calculations for insurance, statistics are a fundamental part of OHS in the United States and reflect an epidemiological approach to surveillance. Statistics are collected directly from employers by both OSHA and the BLS, while statistics from research studies are collected by the NIOSH. These statistics play a role in the establishment of standards and regulatory efforts by OSHA and ground these efforts in rationality, thereby providing them some legitimacy. For example, using statistics, OSHA establishes levels of permissible exposure to potentially hazardous materials and requirements for personal protective equipment.⁹ The collection of these statistics is undertaken through the support of employers. Under OSHA regulations, certain employers¹⁰ are required to report "new cases" of work-related injuries and illnesses within OSHA 300 logs. Through these logs, "safety" becomes objectified as something that is quantifiable and, through analyses, injuries and illnesses are transformed into distributions across industries that allow for the targeting of interventions.

⁹ Permissible exposure levels (or PELs) are the maximum concentration of a chemical that a worker can be exposed to according to OSHA regulations. Personal protective equipment (PPEs) are the materials OSHA requires workers to wear when workers' exposure to a hazard cannot be adequately controlled within acceptable levels through engineering and administrative controls. Employers are required to ensure PPEs are adequately maintained and that employers who use them are properly trained in their use.

¹⁰ Companies with 10 or fewer employees in the last year and/or classified as in a "low risk" industry, unless otherwise informed, are not required to keep and report these records ("partially exempt"); however, these businesses must report to OSHA any workplace incident that results in a fatality or the hospitalization of three or more employees.

The statistics described above have been routinely criticized for relying solely upon employer-supplied information and providing low estimates of occupationally-related injury and illness in the workforce (Rosenman 2007; Leigh et al. 2004).¹¹ Over time, OSHA has changed the ways that employers are required to report injury and illness data to the government. OSHA definitions fundamentally shape the data that BLS collects, and these statistics affect how OSHA sets standards and identifies areas of emphasis for inspection (Wiatrowski 2004). These definitions determine what “counts” as a work-related injury or illness and affect the entitlements that workers can claim when they are injured or become ill on the job. The changing definitions also reduce the ability for researchers to compare statistics over time to identify trends in OHS (Rosenman 2007; Wiatrowski 2004).

There are multiple incentives for employers to have low occupationally-related injury and illness rates within their workforces. Employers benefit from low rates through reduced direct medical costs, lower workers’ compensation insurance premiums, being able to use good safety records in competitive bidding, and avoiding being targeted for high-hazard workspace inspections by OSHA (Brown 2007). According to some workers and employers, companies sometimes offer year-end “safety bonuses” to employees (HG004 2007). Such policies provide incentives to employees to comply with safety regulations. Yet, they may also inadvertently or intentionally motivate workers to not report workplace-related injuries or illnesses because these policies assign financial and emotional value to safety records. At the same time, members of crews who become injured or ill at work risk loss of face or retribution for lowering the group’s safety record (cf. Pransky et al. 1999). Thus, there is incentive to conduct oneself in a “safe” manner, as well as not report injuries or illnesses. The potential for underreporting of injuries and illnesses due to employer pressure, and the potential for outright denial of claims, is particularly problematic because it skews OSHA data on the prevalence of workplace morbidity, which affects OSHA’s response to problems (MacEachen 2000). In the context of the fabrication and shipbuilding industry, these are issues that require further study.

While how these particular issues work themselves out in the fabrication and shipbuilding industry requires additional focused study, information collected during fieldwork indicates that there is a sense of show and public display when it comes to safety in yards. For example, in discussing the role of safety records in competitive bidding, two current shipyard workers (a welder and a fitter) said that when contracting agents come to visit the yard with safety inspectors, the laborers are required to wear all their required protective gear. However, a day later things return to “normal,” meaning that safety regulations are not always followed so fastidiously (VP002 2007; VP007 2007). In addition to safety practices, official safety records serve as an important marker for yards in the region, highlighting for potential clients the yard’s ability to conduct work in a safe manner and demonstrating to the community that the company treats its workers well and can be trusted. Safety records (incident and experience modifier rates) are an important factor for companies submitting competitive bids, as clients look at specific numbers before even considering reading a proposal. A yard safety manager noted:

¹¹ Specific problems on the side of the employer that have been identified include (1) intentional underreporting or discouragement of workers of reporting, (2) lack of understanding of reporting requirements, (3) lack of resources allocated to maintenance of records, and (4) lack of awareness of an incident because the worker seeks care from a personal care provider (Rosenman 2007).

The safety record drives the industry however—at this point, before they can even bid on a job, they have to show their safety record for the previous three years...You can't even come to the table if your safety numbers don't line up. Which is why we have to be so aggressive about drug screening and safety issues. (BM015 2008).

At a more conceptual level, some managers saw the accident rate as not only reflecting an issue of bottom-line economics, but also the relationship to the community. A former safety officer observed:

We didn't want any employees to ever get hurt in the shipyard...If a worker gets hurt on the job, he can't perform the job that he was meant to do. That's your community impact. The worker can't perform the job that he was meant to do...it's a domino effect in terms of the workers costing the company money if they are not working...Having fatalities on the job was the worst thing because you had to notify the family and of course they would ask how it happened. And that makes you, as a safety person, ask if you did the right thing (PP025 2008).

The safety manager couches this impact in terms of a disrupted social context and the difficulty in conveying the information about a loss to a worker's family. Accidents disrupt the normal operations of the yard, but serious or fatal accidents disrupt the social fabric of the company and community as well.

Other safety officers were more cynical about the reality behind the safety records, seeing them as yet another political game or hoop to jump through in order to create a good image:

Safety is a lot of publicity. The five-star awards, etc. it's between walking the walk and talking the talk. You have to talk it if you're going to walk it and vice and versa. But I know a lot of places that'd say, let's get this over with! (RC044 2008)

The reality is probably somewhere in the middle, between the overly idealistic company that sees itself as a foundation for the local community, and the entirely cynical view that sees the focus on safety and safety records as a farce. As a union business manager noted,

Safety is a big factor now, or at least that's what everybody says. It really depends on the company, and the level of publicity they are getting. A lot of companies spend a lot of time talking about their safety record, or they advertise how long it's been since an accident or whatever, but they only do what they have to do. Everybody likes to talk safety and make it sound like it's their first priority, but [on the yard] it [safety] gets overlooked (BM043 2008).

The image of the company is taken into consideration, but the focus on the safety record is perceived as more of a marketing tool than something that actually does anything to help workers out. Study participants are not suggesting that the companies are inherently unsafe or that they are lying about their safety record, but rather that the emphasis on safety is probably as much for the benefit of the company's image as it is for the protection of the worker. In

answering a question about safety, a former field foreman reflected on the benefits that good safety records have for companies:

It's about the people, but safety is also money. Safety makes companies money. Less emergency room visits, insurance premiums, and so forth. And the safety records make a big difference in getting contract bids these days. Also, if you improve safety, you improve work. A safe crew works better. What we do is always managed risk. There is inherent risk all the time in this industry. (JC002 2007).

For workers who move about from one employer to another and one town to another, the uneven application of regulations and standards is not only obvious but potentially dangerous.

6.4. WORKFORCE MANAGEMENT

To meet OHS objectives requires management of workers and the installation of new workplace behaviors, habits, or practices within workers. The establishment of “health and safety cultures” within businesses is increasingly the stated aim of much of OSHA’s work and is reflected in the ways that some industrial companies market themselves.¹² OSHA regulations in particular establish boundaries for acceptable tasks and behaviors to be performed by workers. The workspace also becomes disciplined through division and regulation, with safety warnings posted in specific areas alerting workers to hazards and worker responsibilities. However, the question remains as to how OHS discourses, as well as procedures, actually affect workers, that is, how they actually respond to signage, these regulations, or deviations from standard practices observed or witnessed on the yard or shop floor.

The issue of workforce management thus emerges as a means by which owners and managers can ensure that workers do things the “right way”, engage in safe practices, and perhaps most importantly, come back to work the next day, which is important for the livelihood of both the worker and the company. A yard manager and a welder, respectively, observed:

Cultural change was needed. There is a saying in the safety field “what you want to do is develop the employee to when he gets in a car he puts the seatbelt on so not to go through the windshield.” It’s “self-imposed discipline” not just to follow the rules. You have to target how to get there. We understood that not everyone responds well to positive reinforcement. (VP082 2008)

There are more rules here and more safety control in place. Safety here comes before the world. Here every day there are meetings. They tell us “you need to go home this evening how you came this morning.” If you are sick or something they’d rather have you go home and get better than keep working unsafely. They fire people for not following the rules, for example for not wearing protection or coming to work drunk. (RC007 2008)

¹² For example, Atlantic Marine, a company with shipyards in Alabama and Florida, states on its webpage: “With safety at the forefront of our culture, Atlantic Marine’s injury rates are traditionally equal to or lower than other U.S. shipyards and businesses in the manufacturing industry.” Moreover, they “safely deliver vessels on time and on budget” (BAE Systems Southeast Shipyards n.d.).

This project of worker surveillance is a partnership whereby the company sets up the framework and watches over the workforce, but the workers themselves have to engage in their own self-discipline to make sure that the safety practices are continued when management is not watching. The metaphor of safety belts and safety on the drive home serve to reinforce this idea, since these are times that management is unable to shape worker behavior. A human resources manager observed:

It comes down to wanting our employees to go home at the end of the day as healthy or healthier than they were when they showed up. We have a goal of being the safest shipyard in the world. We're not there yet but we have a goal to be. We have a remarkable safety record for the industry we work in. The potential to get hurt is all around you and it's amazing we work so many accident-free days Employees who cannot get the message, we will use discipline to try to improve the employee. The philosophy behind our corrective action program is that it's better to improve an employee than to go out and replace him . . . When guys come to me wanting to fire a guy, first thing I say is, "I can't promise I can replace him so let's talk about what he's done." (SR004 2008)

The implication is that management wants to keep the workers safe and healthy, but perhaps most importantly, they simply want to keep the worker.

Notably, the cynicism and skepticism about the "true intentions" of the company described above are reflected in the attitudes and behaviors of members of the workforce. A member of the field research team noted that shipyard workers he talked to during his fieldwork in Louisiana reported that they rarely read the hazard signs posted throughout their work environment or the paperwork they were given to sign documenting their acknowledgement of the hazards they would be exposed to in their work. Another example came from discussions concerning routine safety meetings. A welder in Alabama particularly called such meetings into question:

Sixty percent of the guys at a safety meeting aren't paying attention. They just put the dark glasses on, lean back, pretend to listen and take a nap. It's like a break. (VP002 2007)

Some of this lax attitude can be traced to the aforementioned cynicism and skepticism, since if the safety regulations and meetings are not really significant in helping workers, why should they spend too much time or energy worrying about them? But others were more fatalistic, seeing the entire shipyard context as less subject to the types of oversight and regulation that were seen at, for example, the petrochemical plants and petroleum refineries. A yard manager noted:

You push the basic OSHA safety rules like everybody else, but the people in the shipyard are probably a bit harder to handle on that sort of thing, because losing the job is not that big of a deal to them, it's not enough of a threat. At the plants and refineries—people are long-term employees, they are scared to death of violating a safety rule, because they might lose their job. But in the yards—I mean—nobody wants to not be safe, nobody wants to get hurt—but if a guy is not

wearing his hat, he knows he's probably not going to get fired. You could fire him, but he knows he's here because you need him here. And if you have a run-in with him on something like that, he'll leave and go someplace else. You have to constantly enforce rules. . . if you slack off on the rules, everyone will be slacking off, not wearing hats, not wearing glasses (BM013 2008).

Workers in the shipyard (at least in this particular community) were not particularly concerned with “doing it right” or worrying about getting in trouble, because they were well aware that it would take a lot more than lax safety practices to get fired, given the labor shortage and limited supply of workers willing to work in the shipyards. Similarly, other regulations were less easily enforced, as one shipyard owner confided that he estimated 90% of his yard would fail a drug test if they ran a test that day (see chapter on labor issues). But, he simply did not have any one else to do the work, so while he was not happy with this particular reality, he was recalcitrant to shake up the workforce over a rule that he seemed to feel had little bearing on yard operations.

6.5. CHANGING TRENDS

Most respondents reported that they had observed changes in the accepted norms regarding safety practices at a given yard. There was a strong sense that in the past there was less enforcement and fewer regulations that dictated behavior, and that subsequently, the yards used to be much less safe than they are now. A yard manager remarked:

One of the main changes was safety and employee safety. Those guys, the industry, used to be like it was macho to expose yourself to danger. I had the hardest time bringing safety [to the yard]... It was very hard to change the paradigm of the work habits of the employees. That was the first thing that had to be done to reduce costs because of workman's comp and liability cases (BM035 2008).

And a union business manager noted:

Thirty years ago, no one was wearing any of the protective gear. They weren't wearing ear pro[tection], they weren't wearing glasses, and there were all sorts of injuries associated with exposure to noise, to fumes, to light, to heat, to fire, whatever. Just a lot of different ways you can get hurt (BM043 2008).

In the past, these relatively loose restrictions on what was accepted, and what was considered safe, resulted in an increase in the number of possible negative outcomes, at least in the perceptions of the workers and managers. Another yard manager noted:

We have a training manual designed by the company that workers are trained on, and everyone needs to follow. “Job safety analyses”, for each site on the shipyard. Before, these things were barely talked about. Now, they are at the forefront. Safety and environmental concerns are built into the design of the project. Safety is mostly common sense (JC009 2007).

Some study participants, however, offered the view that the new regulations had gone too far and empowered workers too much. A yard owner complained:

Some of the stuff is almost ridiculous. I heard some people joke that after they started safety meetings, accidents went down 10%; that's because 10% of the time you were stuck in a safety meeting. A lot of it is just common sense. You still have guys that coming from the old school and, you know, "Don't worry about that," whatever. You know, "Just get the job done, do the job." When that first started it was kind of like "safety first" (is one) that costs too much. Now the lowest man on the totem pole can shut down a job if he thinks something's wrong (HG004 2007).

Moreover, new restrictions on how workers do their jobs can be difficult for more experienced workers who have gained comfort, skill, and efficiency in previous practices that may no longer deemed safe. A carpenter observed:

They've tied our hands, we can't do nothing no more. OSHA had a lot to do with it. They implemented some really good stuff. I'm an old hand. I know what we used to do. We were well within the constraints at the time. You used to have to have a safety belt on, but you didn't have to use it. Now there is lots of training, before you can check out a safety harness, they show a video, to show you have to put it on, where to hook up the lanyards....Safety has come a long way...Things I've done, I wouldn't ask anyone to do it. I used to hang from the mast pole, doing it without a safety belt, I climbed like a lineman and tacked the ladder up as I was doing it to keep from building a scaffold. I wouldn't even think about it now (VP092 2008).

This highlighting of "the way I used to do it" and "the way things are (safely) done now" reflects some of the changes that veterans of the industry have to grapple with. Those that have made it this long must have done something right, have been lucky, or both. They have witnessed some of the past behaviors that would not cut it under today's regulations. At the same time, there is a tendency to value this past, and while the new regulations and limitations may be a net positive in terms of safety, the perception is sometimes that this comes at the expense of slowing workflow or decreasing efficiency.

In general, however, it seems that the positive outcomes associated with increased labor regulations are well received, and that the changes have led to improved workplace safety and reduced environmental impacts. A worker noted:

The yard is lots safer now than it used to be, even five to 10 years ago. There has been a big push in both workplace safety and environmental safety. They are now super-careful about any oil or solvent they might use, they have barriers in place to make sure that none of it ends up in the water or in the soil, and they are much more careful about spills than they used to be...this is a good thing, we need to think more about the environment and that we've got to start somewhere, and environmental health and workplace safety are good places to start (BM019 2008).

To be sure, there has been a decrease in shipyard injuries in recent years, as indicated in surveys conducted by NIOSH, but shipbuilding and repair remain a concern; its injury and illness incidence rates remain substantially higher than general industry, manufacturing, or construction (Hudock et al. 2001).

6.5.1. Movements Toward Deregulation

Occupational health and safety needs to be understood in the context of deregulation. Since its inception, OSHA has been subject to pressures for deregulation.¹³ The federal government has increasingly relied on providing incentives for employers to adopt safety cultures and lower work-related injury and illness rates.¹⁴ For example, under the Bush Administration, OSHA had three main strategies (OSHA 2007a): (1) utilizing strong, fair, and effective enforcement strategies involving focusing resources in more hazardous and injury- and illness-prone industries; (2) providing outreach, education, and compliance assistance to employers; and (3) fostering partnerships and cooperative programs.

Under the third objective, OSHA administers an alliance program (through which it maintains three alliances with shipyard industry groups) and the Safety and Health Achievement Recognition Program (SHARP), which gives employers incentives for implementing OHS programs and recognizes employers with “exemplary” OHS achievements. It also operates the Voluntary Protection Program (VPP), which was created in 1982 under President Reagan.¹⁵ Under the VPP, cooperative agreements are established between management, labor, and OSHA in businesses that have implemented “comprehensive safety and health management systems”. Though not completely exempt from inspections, participating businesses are removed from programmed inspection lists and are not issued citations for standard violations that are promptly corrected (OSHA 2007b). Businesses that are recognized in this way are admitted into one of three subprograms: Star, Merit, and Star Demonstration. Evidently, admittance into the program, particularly at the level of Star, is a source of social standing, as well as a means of limiting government oversight. During a visit to a field site in Mississippi, a fieldworker met with an organized labor group who boasted of their company’s recent acquisition of Star status (see above for discussion of importance of safety status in obtaining contracts). Just as worker safety bonuses attempt to induce employees to comply with regulations, special state programs like this

¹³ Parker (2000) discusses a “new” approach to regulation that she terms “compliance-oriented regulation”. This is reflective of the “new regulatory state” wherein emphasis is on self-regulation and providing incentives for voluntary compliance toward regulatory objectives. She says that in the U.S. the movement to control regulatory inflation through maximizing voluntary compliance has been termed “re-inventing regulation.”

¹⁴ By all indications, OSHA has been more employer-friendly and more focused on releasing voluntary guidelines than establishing significant regulations under the Bush Administration. The Bush Administration came into office vowing to limit new rules and roll back “cumbersome” regulations imposing unnecessary costs to business (OMBWatch 2007). For example, a widely-touted ergonomics standard created in November 2000 was voted down by Congress at the urging of Bush in March 2001. This standard had been estimated to save \$9.1 billion during its first 10 years. Bush promised a less-costly business standard, but just a year later OSHA offered up unenforceable voluntary guidelines (OMBWatch 2002). Such guidelines make it difficult if not impossible to hold anyone accountable (Madia 2007b). During the Bush Administration, only one significant standard has been set (on hexavalent chromium) and this was mandated by a court order (Madia 2007a), which is fewer than during any other president’s tenure since OSHA’s inception (Labaton 2007).

¹⁵ See Michaels (1988) for a discussion of the limitations of voluntary corporate compliance approaches to OHS.

try to enlist the active participation of employers in meeting state goals through positive incentives rather than negative disciplinary action.

6.6. DISCUSSION

Federal and state regulations outline the measures and practices that workers, managers, and companies must engage in to prepare for potential crises, protect workers, and respond to actual accidents. Many company owners and managers spoke about how they would "do the right thing" regarding their employees' safety, local working conditions, protecting their employees from harm, and compensating in the event of a tragedy or accident, whether or not regulations were in place. Conversely, a number of managers *and* workers were candid about the degree to which workplace regulations and safety practices were actually enforced by management, or followed by workers. The laws and regulations are intended to create a set of standardized practices and a consistent set of expectations on the part of the employer, who requires and facilitates a certain set of safe practices, and the worker, who agrees to follow the daily practices that are part of the larger regulations. The practical reality is quite different, however, as company managers and owners navigate the rules and regulations to determine their own sets of best practices, tailored to their facilities and workforce that follow the letter, if not always the spirit, of the law. Many study participants expressed some degree of uncertainty about the application as well as the appropriateness of some of these rules. Similarly, workers may choose to selectively follow or even completely ignore workplace safety regulations, with or without the approval (or knowledge) of management. Reasons given during discussions included a perceived reduction of efficiency of workflow when using the proper procedures or safety equipment or a disdain for the use of often cumbersome and uncomfortable personal protection equipment.

Moreover, there is considerable skepticism among workers in general that some of the regulations do any good, and some argue they may simply be in place to ensure the company cannot be found liable in the event of an accident or mishap. In either case, this skeptical attitude towards government regulation has the potentially damaging effect of decreasing compliance with safety regulations, especially those that are viewed as a hindrance to efficient operations, and which may seem to do little to actually protect employees from harm, or which are hard to enforce despite the best efforts of company management and safety personnel.

Still, feigned ignorance of the rules, or outright refusal to follow regulations, can be damaging. In addition to the material threats or hazards that a company may face if it is found to be negligent (e.g., a lawsuit and a settlement or judgment), it also faces a moral hazard within the community if it is perceived to be an unsafe place to work, or as not caring about the safety of the workers. The intent is not to suggest that a majority of workers are trying to "game" the system, or that a majority of owners or managers are trying to exploit workers and skirt safety regulations. Rather, this outlines the existence of a complex assemblage of factors that contribute to the workplace safety context, and highlights the difficulty that workers, managers, and owners face in figuring out what is acceptable practice, on both practical and regulatory levels.

For workers, there is a balance between awareness of the risks that the job presents on a daily basis, caution regarding the potential danger, and a practical acceptance of what it takes to actually be able to get a job done, either by becoming accustomed to working despite the risks or accepting the risks as part of the job that cannot be avoided. For company operations and workforce management, safety is both a practical necessity and a government-regulated reality. A yard or shop that is perceived as unsafe by its workers will quickly earn a reputation among the workers as an undesirable work location, making it difficult for the employer to find and

maintain a workforce. Facilities with safety problems also face added operational costs, not to mention the difficulties an unsafe shop/yard may have in securing contracts.

Where workforce protections are not in place, workers may be afforded less safe working conditions, fewer workplace protections, and significantly less redress against their employers if there is an accident on the job site, regardless of liability or culpability (cf. Blomley 1990; Rosen 1992; Jo Foo 1994). At the same time, as our discussions with study participants and observations suggest, there is a wide variance in the degree to which workers follow safety regulations, as well as a number of factors that affect management's ability to effectively enforce safety regulations. These include overt choices such as lax enforcement, poor supervision, inadequate safety equipment, or generally unsafe working conditions. But they also include somewhat uncontrollable or unforeseen circumstances such as language barriers, difficulty in comprehensive supervision and enforcement, or workers who have their own ideas about when and how safety practices will be followed or how much importance they place on safety planning and preparations. An additional challenge posed by inconsistent application of safety rules and standards is that there is significant movement of workers from yard to yard. Differing practices mean that employees must adapt to differing expectations at new yards and employers must retrain new workers to the accepted practices on the yard.

Safety, and the insurance products designed to mitigate the risks to workers and companies, are an important part of the fabrication, shipbuilding, and ship repair industries along the Gulf Coast. Companies cannot safely operate in the long-term without following mandated safety regulations or purchasing adequate insurance and liability coverage for both property and workers. But these regulations and minimum insurance levels are, at the same time, complex, difficult to navigate or even understand, much less enforce, and often create confusion among workers, managers, and owners. Further, this intersection between the requisite practices to ensure safety and the confusing structures and regulations that have been implemented as guides to assist in risk mitigation, occurs in a group of related industries that involve risky operations and workplaces as part of their day to day operations. This chapter has not been intended to claim that adherence is impossible, and that workers, managers, or companies should be excused for non-adherence. This chapter does present evidence of the complicated tangle of legal, ethical, and moral obligations that companies face in dealing with workplace safety and worker protections, as well as the varied behavior of workers when working in this environment. While our study was not specifically designed to address these issues, they were common responses within our discussions and observations.

6.7. REFERENCES

BAE Systems Southeast Shipyards. n.d. Our Values. Internet website:
<http://.baesystemssyi.com/html>. Accessed August 18, 2011.

Beardwood, Barbara A., Bonnie Kirsh, and Nancy J. Clark. 2005. Victims Twice Over: Perceptions and Experiences of Injured Workers. *Qualitative Health Research* 15(1):30-48.

Beck, U. 1992 [1986]. *Risk Society: Towards a New Modernity*. London: SAGE Publications.

Biddle, Jeff, Karen Roberts, Kenneth D. Rosenman, and Edward M. Welch. 1998. What Percentage of Workers with Work-Related Illnesses Receive Workers' Compensation Benefits? *Journal of Occupational and Environmental Medicine* 40(4):325-331.

- Blomley, Nicholas K. 1990. Federalism, Place, and the Regulation of Worker Safety. *Economic Geography* 66(1):22-46.
- BM013. 2008. Personal communication. Insurance, OSHA regulations and protections. Discussion with Ben McMahan. Fabrication Yard Manager. Orange, TX. April 15.
- BM015. 2008. Personal communication. Safety records and competitive bidding. Discussion with Ben McMahan. Fabrication Yard Safety Manager. Orange, TX. April 16.
- BM019. 2008. Personal communication. Changes in workplace safety. Discussion with Ben McMahan. Fabrication Worker. Orange, TX. April 21.
- BM035. 2008. Personal communication. Changes in safety practices. Discussion with Ben McMahan. Fabrication Yard Owner/Manager. Port Arthur, TX. May 9.
- BM043. 2008. Personal communication. Experiences in shipbuilding and fabrication industry. Discussion with Ben McMahan. Electrician and business manager. Port Arthur, TX. May 14.
- BM059. 2008. Personal communication. Workers compensation and worker practices. Discussion with Ben McMahan. Fabrication Yard Manager. Morgan City, LA. June 5.
- BM134. 2008. Personal communication. Workers compensation types, site designations. Discussion with Ben McMahan. Specialty Fabrication Yard Manager. Morgan City, LA. October 8.
- BM139. 2008. Personal communication. Costs of onshore vs. offshore labor contracting, H2B visa labor practices. Discussion with Ben McMahan. Welding/fitting labor coordinator/recruiter. Morgan City, LA. October 15.
- Brown, Garrett. 2007. Taking a Closer Look. *Occupational Hazards*. Internet website: http://www.occupationalhazards.com/Issue/Article/66378/Taking_a_closer_look.aspx.
- Butler, Richard J. and John D. Worrall. 1991. Claims Reporting and Risk Bearing Moral Hazard in Workers' Compensation. *The Journal of Risk and Insurance* 58(2):191-204.
- Dembe, Allard E. 2001. The Social Consequences of Occupational Injuries and Illnesses. *American Journal of Industrial Medicine* 40(4):403-417.
- Ewald, F. 1991. Insurance and Risk. In: Graham Burchell, Colin Gordon, and Peter Miller, eds. *The Foucault Effect: Studies in Governmentality*. Chicago: The University of Chicago Press.
- Fan, Z. Joyce, David K. Bonauto, Michael P. Foley, and Barbara A. Silverstein. 2006. Underreporting of Work-Related Injury or Illness to Workers' Compensation: Individual and Industry Factors. *Journal of Occupational and Environmental Medicine* 48(9):914-922.
- Fishback, Price V. 2001. Workers' Compensation. *EH.Net Encyclopedia*. Robert Whaples, ed. Internet website: <http://eh.net/encyclopedia/article/fishback.workers.compensation>.

- Fuge, Christine. 2000. A Review of the Longshore and Harbor Workers Compensation Act. International Risk Management Institute. Internet website: <http://irmi.com/asp>.
- Good Morning America. 2006. Cheating Disability Claimants Cost You. Reporting by ABC News' Elizabeth Leamy. Internet website: <http://.go.com/?=&page=>.
- Hardin, Garrett. 1968. The Tragedy of the Commons. *Science* 162:1243-1248.
- HG004. 2007. Personal communication. Changes in safety practices. Discussion with Heather Gallivan. Fabrication Yard Owner. Chauvin, LA. June 20.
- HG008. 2007. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Heather Gallivan. Former industrial mechanic. Chauvin, LA. June 22.
- Hudock, Stephen D., Steven J. Wurzelbacher, and Ova E. Johnston. 2001. Preliminary Survey Report: Pre-Intervention Quantitative Risk Factor Analysis for Ship Construction Processes at Jeffboat, LLC. National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services. Report Number EPHB 229-11a. Internet website: www.cdc.gov/niosh/ergship/PIQRFA%20Jeffboat.pdf.
- JC002. 2007. Personal communication. Safety and savings, managing risk. Discussion with Jacob Campbell. Retired Foreman. Galiano, LA. July 11.
- JC009. 2007. Personal communication. Safety and Environmental Concerns. Discussion with Jacob Campbell. Fabrication Yard Manager. Larose, LA. July 17.
- Jo Foo, Lora. 1994. The Vulnerable and Exploitable Immigrant Workforce and the Need for Strengthening Worker Protective Legislation. *The Yale Law Journal* 103(8):2179-2212.
- Labaton, Stephen. 2007. OSHA Leaves Worker Safety in Hands of Industry. *New York Times*. April 25.
- Leigh, J. P., Marcin, J. P., and Miller, T. R. 2004. An Estimate of the U.S. Government's Undercount of Nonfatal Occupational Injuries. *Journal of Occupational and Environmental Medicine* 46(1):10-18.
- Lupton, D. 1999. *Risk*. New York: Routledge.
- MacEachen, Ellen. 2000. The Mundane Administration of Worker Bodies: From Welfarism to Neoliberalism. *Health, Risk & Society* 2(3):315-327.
- MacLaury, Judson. 1981. The Job Safety Law of 1970: Its Passage was Perilous (Originally published in *Monthly Labor Review* in March 1981). Internet website: <http://www.dol.gov/oasam/programs/history/osha.htm>.
- MacLennan, Carol A. 1988. From Accident to Crash: The Auto Industry and the Politics of Injury. *Medical Anthropology Quarterly* 2(3):233-250.

- Madia, Matt. 2007a. House Passes Popcorn Workers Lung Bill. OMBWatch. RegWatch. Internet website: <http://www.ombwatch.org/article/blogs/279/20>.
- Madia, Matt. 2007b. OSHA's Position on Diacetyl Is Emblematic of Bush Preference for Voluntary Standards. RegWatch. OMBWatch. Internet website: <http://www.ombwatch.org/article/blogs/entry/4061/7>.
- Michaels, David. 1988. Waiting for the Body Count: Corporate Decision Making and Bladder Cancer in the U. S. Dye Industry. *Medical Anthropology Quarterly* 2(3):215-232.
- Occupational Safety and Health Administration (OSHA). 2007a. OSHA Facts -- August 2007. Internet website: <http://www.osha.gov/as/opa/oshafacts.html>.
- Occupational Safety and Health Administration (OSHA). 2007b. Voluntary Protection Programs: All about VPP. Internet website: http://www.osha.gov/dcsp/vpp/all_about_vpp.html.
- OMBWatch. 2007. OSHA's Lack of Standard Setting under Fire. OMBWatch. Internet website: <http://www.ombwatch.org/article/articleview/3818>.
- OMBWatch. 2002. OSHA a Monster? OMBWatch. Internet website: <http://www.ombwatch.org/article/articleview/842/>.
- Parker, Christine. 2000. Reinventing Regulation within the Corporation: Compliance-Oriented Regulatory Innovation. *Administration & Society* 32(5):529-565.
- PP025. 2008. Personal communication. Safety and accidents on the shipyard. Discussion with Preetam Prakash. Safety Officer. Pascagoula, MS. July 9.
- Pransky, G., T. Snyder, A. Dembe, and J. Himmelstein. 1999. Under-Reporting of Work-Related Disorders in the Workplace: A Case Study and Review of the Literature. *Ergonomics* 42(1):171-182.
- RC007. 2008. Personal communication. Safety and workplace practices. Discussion with Rebecca Crosthwait. Welder. Ingleside, TX. March 18.
- RC044. 2008. Personal communication. Safety and publicity. Discussion with Rebecca Crosthwait. Safety Officer. Ingleside, TX. May 9.
- Rosen, Summer M. 1992. Protecting Labor Rights in Market Economies. *Human Rights Quarterly* 14(3):371-382.
- Rosenman, Kenneth D. 2007. Are Work-Related Conditions Less Common or were their Definitions Changed? *Journal of Occupational and Environmental Medicine* 64(7):429-430.
- Rosenman, Kenneth D., Joseph C. Gardiner, J. Wang, Jeff Biddle, A. Hogan, Mary Jo Reilly, K. Roberts, and E. Welch. 2000. Why Most Workers with Occupational Repetitive Trauma Do Not File for Workers' Compensation. *Journal of Occupational and Environmental Medicine* 42(1):25-34.

- Schulte, Paul A. 2005. Characterizing the Burden of Occupational Injury and Disease. *Journal of Occupational and Environmental Medicine* 47(6):607-622.
- SD015. 2007. Personal communication. Finding and recruiting workers. Discussion with Diane Austin. Labor Contactor. Orange, TX. November 12.
- SR004. 2008. Personal communication. Discipline and worker protections. Discussion with Sarah Raskin. Human Resources Manager. Lockport, LA. June 24.
- Susser, Ida. 1988. Directions in Research on Health and Industry. *Medical Anthropology Quarterly* 2(3):195-198.
- U.S. Department of Labor. 2002. Office of Administrative Law Judges Law Library. Judges Benchbook: Longshore and Harbor Workers' Compensation Act. 2002 Revision. Internet website:
[http://.oalj.dol.gov////_WORKS/_OALJ_LHWCA_BENCHBOOK_CONTENTS_\(2002\).HTM](http://.oalj.dol.gov////_WORKS/_OALJ_LHWCA_BENCHBOOK_CONTENTS_(2002).HTM).
- VP002. 2007. Personal communication. Safety meetings and workers. Discussion with Victoria Phaneuf. Welder. Bayou La Batre, AL. June 14.
- VP007. 2007. Personal communication. Changes in safety practices. Discussion with Victoria Phaneuf. Former sheet metal worker. Oceans Springs, MS. June 25.
- VP082. 2008. Personal communication. Changes in the industry and workforce management. Discussion with Victoria Phaneuf. Fabrication Yard Management. Pascagoula, MS. May 30.
- VP092. 2008. Personal communication. OSHA regulations and changes in practices. Discussion with Victoria Phaneuf. Carpenter. Gautier, MS. June 8.
- Walters, Vivienne. 1985. The Politics of Occupational Health and Safety: Interviews with Workers' Health and Safety Representatives and Company Doctors. *Canadian Review of Sociology and Anthropology* 22(1):57-79.
- Weil, David. 1996. If OSHA is so Bad, Why is Compliance so Good? *RAND Journal of Economics* 27(3):618-640.
- Wiatrowski, William J. 2004. Occupational Injury and Illness: New Recordkeeping Requirements. *Monthly Labor Review* 127(12):10-24.

7. CONES OF UNCERTAINTY: THE NATURE OF BUSINESS IN HURRICANE COUNTRY

Ben McMahan

7.1. INTRODUCTION

The significant impacts and far-reaching media coverage of Hurricane Katrina and the aftermath generated national attention among political officials and private citizens alike regarding the problem of hurricanes. This increased attention also reinvigorated a focus on preparedness and planning that initially saw much of its genesis during a period of heightened perceived vulnerability in the aftermath of the 9/11 attacks. While the initial emphasis in this environment was placed on national security (Collier and Lakoff 2008), Katrina highlighted a different kind of crisis, preparation in advance of natural disasters and their social and physical consequences, a level of preparation that Lakoff (2006) terms “population security.”

Katrina exposed the failed and/or delayed response on the part of local, regional, and federal government agents and agencies, and the experience of the impoverished areas and peoples of New Orleans. A great deal of attention has been focused on these failings, what went wrong with Katrina, and the underlying social fractures it may have highlighted (Freudenburg, et al 2009). Comparatively little consideration has been given to other communities along the Gulf Coast and how their local industrial or economic context may help drive preparedness capacity and community response to disaster, and how the unique context of Gulf communities and their experience with storms shapes and is partially shaped by their relationship with the fabrication and shipbuilding industries.

The reality is that hurricanes, the seasonal disruptions they cause and threats they pose, are persistent realities for residents, businesses, and communities along the entire Gulf Coast. During fieldwork between 2007 and 2009, recent hurricanes and their impacts were fresh in the minds of study participants, especially Ivan in 2004 and Katrina and Rita in 2005. Additionally, most of the study field sites were directly impacted during the 2008 hurricane season, which included Dolly (South Texas), Gustav (Louisiana), and Ike (Texas and Louisiana) (Figure 7.1).

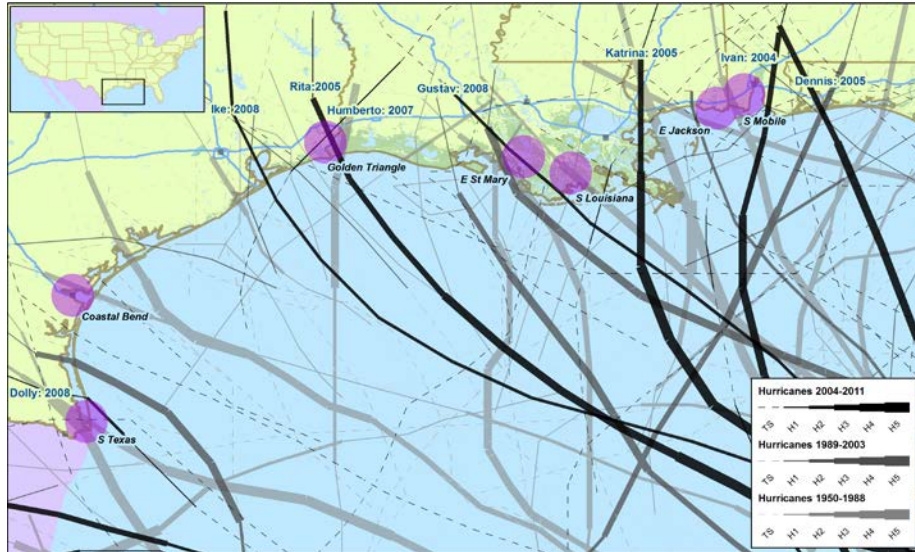


Figure 7.1. Recent hurricanes in the study area
 Source: Ben McMahan

Study participants voiced their concerns, perspectives, and ideas about hurricanes and the impacts they had on industry, their community, and their lives. The impacts of recent storms were also still visible as prominent features of the local physical, social, political, and economic landscapes, including lost or damaged commercial buildings, queues of boat and rig/platform repairs in local yards, or the ever present blue tarps on the roofs of damaged homes (Figure 7.2).



Figure 7.2. Impacts of hurricanes still evident during the study period.
Source: Ben McMahan

While there are far-reaching impacts and consequences for local communities when storms hit, these storms also affect coastal fabrication, shipbuilding, and ship repair industries, and oil and gas production more broadly, in a number of ways, including:

- General labor shortages within local industries and the search for new and often mobile and/or temporary labor forces to deal with the cyclical fluctuations in demand among these industries that was related to both hurricanes and larger patterns within the industry;¹
- Workforce and supply chain interruptions and strategic decisions by companies and communities to mitigate these interruptions;
- A need to balance an increased workloads following hurricanes, as oil- and gas-related infrastructure must be repaired, replaced, salvaged, or reconditioned, while sustaining progress on existing contracts and projects that must be completed;
- General social upheaval and disruption that displaces existing workers and residents, and may keep new recruits from moving to the region.
- Lost production capacity when refining facilities are shut down or damaged, platforms are lost or damaged, or pipelines are compromised by storm events; and
- Damage to or loss of oil- and gas-related infrastructure equipment such as fabrication or repair facilities, crew or supply boat fleets, or oil transport barges.

Some of these factors are specific to particular storm events, (e.g. the widespread displacement of residents and loss of workforce following Katrina), but they illustrate themes that study participants raised in discussions of storm impacts on communities and business practices. Additionally, many of these impacts represent losses to either specific infrastructure or general production capacity, which require skilled labor and substantial material investment to ameliorate. Subsequently, fabrication, repair, and shipbuilding facilities serve a critical role providing this labor and investment as they repair, refurbish, and replace lost or damaged oil and gas infrastructure, vessels, platforms, and components, and they are well-positioned (both figuratively, and literally) to take advantage of increased workloads following storms.

The ability to make a living is a key driver in locating in a region that is known for recurrent hurricanes. In such locations, the risks of tropical storms and coastal flooding, and the benefits of industrial growth, profit, and job creation, are precariously balanced in a mix of necessity, profitability, and risk. Most residents understand the nature of the Gulf Coast weather patterns, and recognize that the old adage holds true—it is not a matter of *if*, but of *when*, a storm will affect their community. And as a fabrication yard manager described it, the best thing that could happen for their business would be for a small hurricane to come through the gulf every couple of years, tear up some rigs, but fade out before making landfall. This would mean that there would be enough damage to boost business, but no one would feel guilty about the extent of damage.

Fabrication and shipbuilding operations are located in the direct path of future storms, yet they stand to profit if they can take advantage of any business booms due to hurricane damage of oil and gas infrastructure. This highlights a paradoxical reality about fabrication operations and

¹ As documented later in this chapter and in Chapter 5, this volume, the labor shortages were not caused by hurricane events, but may have exacerbated some of the existing problems with labor availability.

storms: businesses are at risk given their proximity to the Gulf, yet the impact of these storms is not solely negative, as there is potential for a great deal of fabrication- and shipbuilding-related business in the quite literal wake of a storm event. This includes increases in (1) repair workloads; (2) inspection, survey, and salvage operations; (3) new replacement construction; and (4) refurbishment of existing rigs, platforms, and vessels. By way of example, an economic development officer in one of the study communities recounted a media interview during which, after discussing the economic stimulus effect a recent hurricane had had on the local industry, he was accused, albeit partially in jest, of wanting hurricanes to hit. He responded, somewhat matter-of-factly, that while the storm was indeed tragic for many of the people who had been affected, he was only making lemonade out of the lemons (BM037 2008). He was certainly not alone in what is perhaps best described as a cautious or grounded optimism, as numerous study participants, ranging from fitters and welders in the yards, to managers and owner-operators of larger companies recognized this paradox and the benefit that hurricanes and the damage they cause in the Gulf bring to the fabrication, ship repair, and shipbuilding industries.

Of course, no sane or compassionate person would wish for the tragedy and loss associated with major storm events, but the resultant boom in business is such that a commonly-held and articulated sentiment of many in the Gulf Coast region, and especially those associated with the marine, oil and gas, fabrication, or ship building and repair industries, is that if your business, and your community, can make it through the storm relatively intact, there is the potential for ample business growth during recovery and rebuilding efforts, especially if other Gulf Coast facilities are damaged and (temporarily or permanently) taken offline. This underscores a begrudging acceptance of the reality of hurricanes and their impacts, while simultaneously focusing on any positive outcomes stemming from their experiences. Thus, if and when approaching storms veer off course and are no longer bearing down on your own community and company location, there is more than one reason to celebrate. First, for the now averted local disaster and the safety of the community, but perhaps equally as important, for the potential boom in business as repair, refurbishment, and replacement orders pick up and often give local companies more work than they can handle. At least until the next storm hits.

Clearly, the relationship between hurricanes and the fabrication and shipbuilding industry is notably symbiotic, with potential for both positive and negative feedback depending on the degree of severity of the storm and the location of landfall. Consequently, 2005 was a “banner year” for those engaged in repair and refurbishment. Between Katrina and Rita, a significant proportion of structures in the Gulf were in the path of a hurricane (see Figure 7.3).

Hurricanes pose a serious threat to long-term viability for companies and the communities at large, since a direct hit (either storm or surge) can affect both short-term viability or profitability as well as long-term sustainability, at both company and community levels. At the same time, these storms are a driving force in business growth and booms in business activities as companies repair or replace hurricane-damaged equipment, and communities thrive during times of economic expansion and growth. In addition, there is considerable motivation on the part of local politicians, industry leaders, and residents alike to respond quickly to allow oil and gas production to get back online. This makes the regional fabrication and repair yards a critical feature of the post-hurricane recovery landscape, and a potentially profitable enterprise for the companies that are prepared and therefore able to supply needed services to companies who are more than ready to pay for such services. Hurricanes and storm events impact the local industry as well as the coastal communities that provide workers, logistical support, bases of operation

and maintenance, and house the companies, the workers, and the services that support both. In short, no one wants the tragedy, but everyone will take the work.

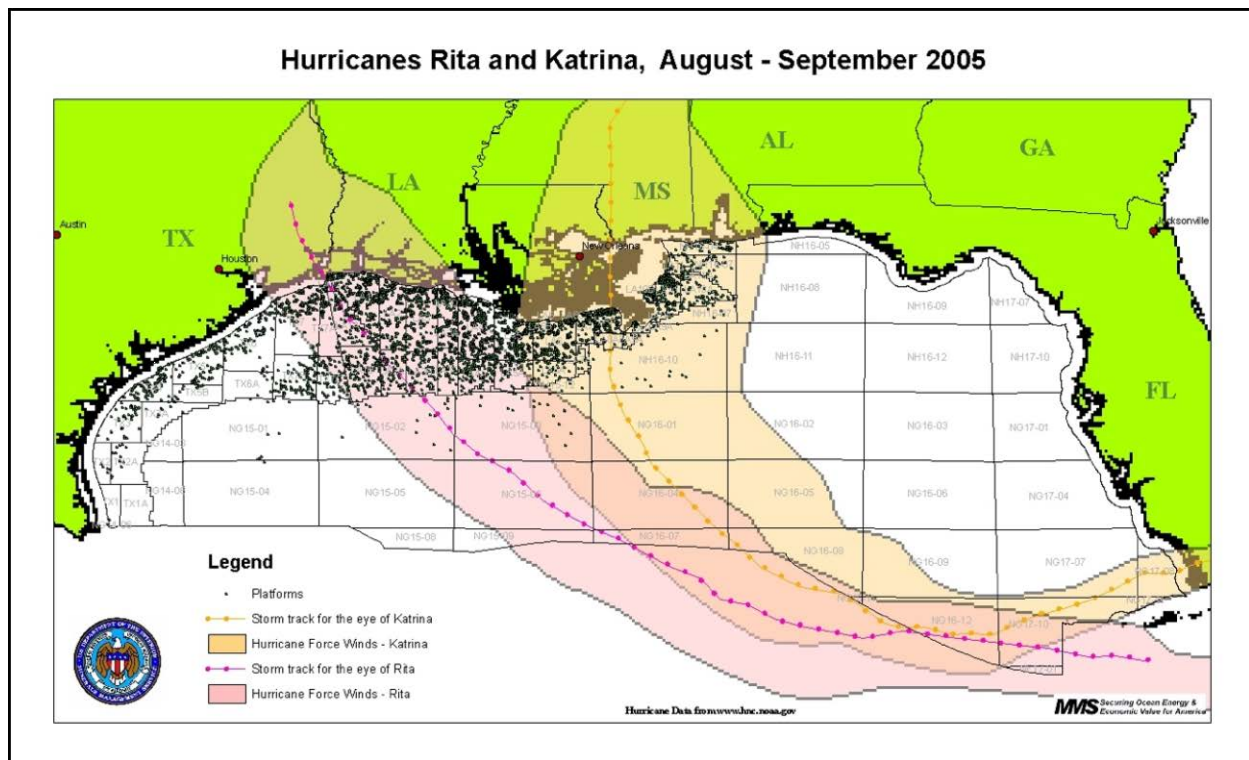


Figure 7.3. Relationship between 2005 hurricanes and petroleum platforms in the Gulf of Mexico. Source: MMS; see also MMS 2006

This chapter documents the modern-day context of the fabrication and shipbuilding industries and their relationship with hurricanes and their impacts. The chapter addresses a number of the ways that local companies both respond to and prepare for storm events, and discuss the ways in which this preparedness capacity, at an industry level, also carries over into local community preparedness. Additionally, the chapter also documents the industry response to the increased workload that occurs in the wake of hurricane storm events, as well as specific strategies, intentional or otherwise, that companies have employed to address the effects of these storms and their aftermath on their business practices and outlook. Finally, the impact of hurricanes can also affect the ways in which local communities frame their place within the local landscape. This can be especially relevant when it comes to recruitment of potential workers who may be wary of relocating to “hurricane alley” and may only know hurricanes from sensationalized media coverage. The attraction or retention of companies who make decisions about relocating on the basis of characteristics of local communities include the potential storm risks and the companies’ own assessment of their potential resilience and perceived capacity to withstand the impacts of storms.

7.2. COMPANY AND COMMUNITY RESPONSES TO HURRICANE EVENTS

There are a number of factors associated with storm events that shipbuilding and fabrication companies, and their host communities have to face. These include:

1. A storm's short-term impact on the existing skilled labor force and their availability in the aftermath of the event, as well as the long-term demographic changes that may affect worker location, mobility, and availability.
2. The increasingly cyclical nature of the fabrication- and shipbuilding-related work, which may be exacerbated by the increase in work in the two to three years after a big hurricane season, followed by an inevitable tapering off as hurricane related work is completed.
3. The need to ensure consistent access to needed services such as electricity after a storm event, and to address the needs of workers (e.g. housing, extended leave to repair household damages, and family crises).
4. The need for communities to "frame" themselves in terms of storm preparedness and resilience and adaptability, and to recruit new businesses and workers.

7.2.1. Storms' Impacts on Labor Forces

Management faces considerable difficulty in tracking the workforce during and after storms. Checking in with one's employer is likely to be low on the list of priorities when dealing with the aftermath of a serious storm. Evacuations of temporary or short-term employees are particularly difficult to track, as there is a great deal of uncertainty that surrounds these employees and their status. While Katrina was in many ways a unique event and one must be careful in drawing broad generalizations, statistics from the post-Katrina evacuation of New Orleans to Baton Rouge and other locations indicate that many people still had not returned to the city (Johnson 2007; Edmondson 2008). Discussions with residents in other study communities indicate this is not an isolated occurrence. Given this uncertainty, and the extended lengths of time that some residents may be gone before returning, very little is known about the actual numbers or reasoning of workers who do not come back. It is hard to know why particular persons did not come back, where they went, or whether they will eventually find their way back to the community.

Fabrication and repair infrastructure is relatively easy to bring back into operational conditions following storms, and it is certainly a priority to companies, given the possibilities of increased post-storm needs for such facilities. But for returning workers who face substantial storm damages to their community and their homes, returning to work is not their first priority. They deal with their household's needs and any other personal issues related to the storm or the evacuation that they may be facing. This impacts the ability of companies to quickly return to normal operations.

Temporary evacuations also disrupt the already volatile local labor markets. At the time of fieldwork, employers were scrambling to fill skilled labor positions to keep up with contracts and project timelines. Any disruptions, especially those at a local level, put them at a disadvantage to regional competitors who may not have suspended business operations. A manager of a fabrication yard observed:

We've been ready to go for a while now. It took a couple days to get electricity, but that's to be expected. What took longer was getting our guys back. This took a

bit more time, because a lot of them were waiting longer for their electricity than we were [at the yard] (BM122 2008).

Such delays are unfortunate for the companies, which do not want to get any further behind, and may want to begin bidding or working on any available “hurricane work” as soon as it becomes available. This immediacy does represent a significant possible benefit for local residents who work in these yards, however. Workers in many other local businesses may be stuck without a paycheck for a week or even a month, as retail businesses are slow to open or have had their supply chains interrupted. Fabrication and shipyard workers may fare better, since managers at several fabrication yards indicated that they were ready and waiting for workers to return after storms.

The storms and recovery efforts can also drive demographic shifts that do not benefit the local companies, who are unable to compete with the level of wages paid for rapid response disaster recovery operations, and whose employees may be tempted by the additional income. A yard manager observed:

Before Katrina, we had over 1,000 people. . . . But since Katrina—we’ve lost so many of our company people . . . Now we have a lot more sub-contractors in addition to whatever employees we have. . . . A lot of it has to do with FEMA and some of the cleanup work—they’re getting paid decent money along with per diem for their food and housing, so they are taking that money and banking on it. Or they just ended up someplace else, and didn’t want to bother with coming back. It’s hard to say (BM133 2008).

At the same time, employers were sometimes hesitant to dismiss or write off a given employee, given how difficult it had been to find and keep skilled laborers. Rather than wholesale rehiring, some companies sought to use temporary labor as a stopgap measure, hoping that their regular workers would return to work at the company eventually, if not immediately.

For a good couple of months after Katrina we did not know who was coming back and did not want to terminate anyone who just had not had the chance to get back. We wanted to give everyone time to get their business in order and get back. A lot of people did move right away. For those of us who only had their jobs, then we came back quick, but it was different for people with families . . . I would say that some of them came back but not all of them. We filled in with contract labor. After the storm we have filled in about 30% with contract labor. We don’t like that. We like to have our workers feel like they have an attachment to the company (PP029 2008).

Given the labor shortage in place before and after the storms, it did not matter whether an employee was away due to a difficulty with evacuation or storm damage, or because they were taking advantage of recovery work. What was important in the eyes of management and HR professionals at local companies was getting their workers back. That said, these same managers and HR staff frequently asserted that it was common for workers to stay away, especially if they found employment that was more lucrative or less demanding, and which allowed them to make

a lot of extra money quickly, and at the same time avoid the working conditions of the fabrication and shipyards.

We had a general training program that was about 10 steps or so, but Hurricane Katrina sucked up all of our trainees. At that point a helper that couldn't read a tape measure could get a 25 dollar an hour job (PP066 2008).

Employers and managers consistently reported that they lost workers following hurricanes, and in particular Hurricane Katrina, because the workers could make higher wages elsewhere, rather than because the workers did not return. Wages were a frequent topic of discussion, and many study participants felt that cleanup and recovery work, in particular, drew workers away from the fabrication and shipbuilding jobs, even if only temporarily. While this draw away was important in the short term, much more importantly, study participants felt that the additional work and increased income drove up people's expectations for what a competitive wage in the area would be. This wage was available during recovery efforts, but fabrication and shipbuilding companies were unwilling or unable to pay at these elevated levels. Several participants from the Pascagoula area commented on this. According to two yard managers,

People were being paid high wages to do things like clean up trash (PP058 2008).

What also affected it was Katrina, people moved out of the area . . . We could have expanded except for the lack of workers. After Katrina the federal government was here, FEMA. They affected without realizing it the economics available for workers. They were hiring at higher prices to aid in rebuilding, even people to hold signs. That put an upward pressure on wage systems and a number of workers left to chase debris removal (VP080 2008).

These issues go beyond a simple lack of laborers driven by hurricane evacuations. They also include the important perception that recovery drove up worker wage expectations, while at the same time providing work that is actually easier than working in the fabrication, shipbuilding, and repair yards. Given the transient nature of much of the recovery work, it is difficult to document empirically the exact wages and motivations of workers participating in a disaster recovery effort. It is easy to understand, however, why the fabrication and shipyards, which did not have the ability or desire to keep up with escalating wages, would have had a difficult time hiring and keeping workers, even if there were surplus workers available.

In addition to the wage escalation associated with recovery efforts, there were also those who indicated that insurance and recovery money paid to companies, along with the strong motivation to quickly repair and rebuild infrastructure, may have driven an increased demand for fabrication and ship repair services. According to the individual responsible for sales and marketing at a southern Louisiana shipyard,

After the storms, the government pumped money to certain companies down here . . . [which] started paying wages that were unheard of. Insurance claims were being used to get repairs done, and get operations back online. We had to compete with companies paying premium wages, and we lost a lot of good people (JC011 2007).

The rapid expansion of potential business opportunities meant that company owners and managers were willing to do anything within reason to facilitate a rapid return to full capacity on their yards, and often found themselves limited only by the supply of available workers.

For us, everyone was pretty much back within a month. . . . I was sleeping in the office, and we had guys sleeping in the main hall. We didn't have any lights, any AC, but everyone that could was back working. It was quite an effort . . . but the idea that the industry didn't have the people to work might have been true for a little while, especially with all the reconstruction and repairs that were being done, but for the most part, there were people who were back and ready to get back to work (BM043 2008).

It took [us] about a month to get back up and running with limited operations, but we were one of the first operations back running after the storm. We were just begging people to bring in work for them at first because I wanted to get my guys working. They had jobs lined up before they even had people back to work them, and they did a lot of the early work with diesel welding equipment and other generator-run facilities, because they didn't have electricity back yet (BM031 2008).

Even in instances where the basic infrastructural necessities like air conditioning and electricity were unavailable, company management found ways to make do. A key trend that emerged from the research was that the fabrication and shipbuilding industries in this region were a powerful force in driving an expedited form of recovery after a storm. The companies want to make a profit, there is a tremendous amount of work that booms after the storms, and companies need workers to complete this work. Unlike an area that might be dependent on retail or shipping services, the industrial construction, fabrication, and repair facilities in the region suffer little to no lag in operation, assuming they were fortunate enough to avoid significant damage to their facilities. By creating a situation where there are not enough workers to satisfy its demand for labor, the post-storm environment does seem to ensure that any worker who wishes to get back to work will have the opportunity to quickly do so, and others who are interested in finding new work as a result of these expansions should have little trouble finding these jobs.

As a final point, it is important to note that many study participants were quick to volunteer that they did not think it was solely the hurricanes that were creating the labor shortage and increased competition. They felt that the storms amplified an existing labor shortage and that, while workers may eventually find their way back into town, there was tremendous competition for their services upon their return, regardless of the impact or effects of the storm. According to one shipyard vice president,

Since Ivan there have been labor issues in the region. Skilled labor has been lacking for a while, and pre-Katrina, they figure they were lacking 25,000 skilled workers along the Gulf Coast. . . . But the bigger problem was they figure 80% of the population was displaced after Katrina/Rita, and so it was really tough to get

people back into town and into your shop to get things back to work. There are at least eight other companies like [ours] in the region, and another 40 like [ours] if you include the refineries, construction trades. This means that everyone is vying for the same labor talents and skills, and there just isn't enough to go around (BM028 2008).

7.2.2. Interaction between Storms and Business Cycles

Once facilities are repaired and workers return to the yards, activities spike. The boom and elevated business cycle described in the prior section underscore another crucial tie between hurricanes and the fabrication and shipbuilding industries: the paradoxical link between the destructive force of a powerful Gulf hurricane that threatens coastal communities, and the resultant boom in business for the fabrication and shipbuilding companies located in these communities. There are upswings in fabrication and repair business associated with storm damage, as powerful winds and water damage or destroy the very structural steel components, platforms, and vessels that the on-shore fabrication and shipbuilding companies are charged with building, repairing, refurbishing, and salvaging. A shipyard vice president and director of sales and marketing commented on this reality:

After the hurricanes the rig repair business just exploded—there were so many terribly-damaged rigs that you could keep yourself really busy just doing rig repair—which means that we're always half hoping for another hurricane . . . because it's good for business . . . but it's never good if anyone gets hurt, or if it comes up your stovepipe (BM031 2008).

Katrina destroyed everything. It was a real tragedy. However, we were doing a great deal of business after Katrina. There was a lot of building going on and [company name] was replacing a lot of stuff (PP038 2008).

Beyond simply providing an opportunity for increased business or times of relatively plenty, these spikes in activity also facilitated increased growth within the industry. Since many oil-related companies was desperately seeking out fabrication and repair yards to carry out their work, it was an excellent time to consider expanding an existing yard, or even the opening of a entirely new yard. According to an owner and a general manager,

The truth is every time you have a natural disaster you will have business. That sounds bad but it is true. If you don't take care someone else will take advantage. You just have to keep growing. My shop expands every year. We used to do mostly seasonal work and now we work more year round (PP070 2008).

After the storms, everything has been in short supply. Materials, metals, labor, housing. We're seeing many of our customers stealing our workers, paying them more money, and cutting us out of the process. There has been a shortage of drydocks, or shipyard space. So, boat owners have been buying up waterfront property, hiring our skilled laborers, and having them do exactly the same thing as we do. The boat owners can pay the workers more, because they are making tons of money on offshore contracts (JC009 2007).

Despite the possibility for increased capacity and growth, participants' comments nevertheless reflected an understanding that the growth would not be forever, and that there was always the potential of a downturn in demand for fabrication services, concomitant with the prior uptick. Still, it was thought that one would be foolish, or at least overly prudent, not to take advantage of these upward trending cycles. The general manager continued:

Oil is where all the big money is. The last two years, it is rare for a vessel to come in and for anyone to even ask the price. Before Katrina, we did no work without having to put in a bid. Now the main factor is time, not money. The oil companies are looking for speed of work—price is no object. But when the oil field slows down . . . (JC009 2007).

This quote suggests that slowdowns in the industry are perceived or understood in a similar way to the way hurricanes impact the coast: it is not a matter of *if* these slowdown will occur, but *when*. And company management must continue to be cognizant of the inevitable slowing, even though the timelines may be different.

About a year or year and half after the hurricane we started on an 18 month stretch where we had a good level of work. After that things went downhill. There were a lot of guys getting laid off all over (PP034 2008).

Even as the research team was wrapping up fieldwork in the fall of 2008, the region was already witnessing a slowdown within the local industries, due largely to the falling price of oil, and the national and global economic downturn. At the same time, much of the 2005 storm repair work was being completed. A number of areas had been thriving doing rig refurbishment work, platform repairs or renovations, or vessel construction and repair, and they were forced to scale back their operations and subsequently their workforce to adapt to the changing economic climate and conditions. A few companies had even completely gone out of business, although damage due to Hurricane Ike kept some yards operating.

The temporal span of the field research thus highlighted a diverse set of circumstances, illustrating the complexity that characterizes the labor situation for the Gulf Coast fabrication and ship repair industries. At the beginning of the fieldwork in mid-2007, and well into the middle of 2008, companies simply could not find the workforce to keep up with existing work, as well as the boom in business associated with the hurricane damages from the storms of 2005. But by the end of 2008, as it became clear that much of the damages from the 2008 storms were to facilities and infrastructure that were not likely to be replaced or repaired,² layoffs became more common, and unemployment rates began to creep upwards, mirroring the national economic trends that this region is often immune from. Still, many companies were looking for skilled workers. The cyclical nature of the business was further exacerbated by the impacts of the Gulf storms, but this did not change the underlying labor dynamic, namely that of gradual loss of skilled laborers and a serious search for workers to replace this shrinking labor force.

² “The platforms that were destroyed were generally older platforms with relatively low production volumes. Of the 49 platforms lost, 44 produced less than 1,000 bopd and just 5 produced between 1,000 and 5,000 bopd: (Rigzone 2008).

Significantly, a factor that may have played a large role, as discussed in detail in the two preceding sections, was the way in which the rush for business and workers, both within and outside the fabrication and ship repair industries, may have driven wages up, where they remained, even as the workloads began to decline.

7.2.3. Company Strategies for Pre-storm Preparedness Plans and Post-storm Recovery

To be able to take advantage of the post-hurricane business booms, shipbuilding and fabrication companies must be able to get up and running quickly after a storm. This section highlights the way companies can prepare for and respond to storms to repair damage to this infrastructure and make it possible for them to get back to work quickly. Companies prepare for an evacuation in a number of different ways on their site; large yards have a tremendous amount of infrastructure to deal with before they can move out. This can be a costly proposition for the company, and requires a commitment of significant resources, mostly in the form of person hours. A company owner and human resources manager described how they respond:

We mobilize an evacuation team to evacuate the movable equipment. At a yard of this size 25-30 thousands of dollars is what it costs [in] man hours to prepare, disconnect, store and move equipment and bring it back, not including the damage . . . Katrina destroyed 250 thousand dollars of equipment on the yard that couldn't be moved and all the buildings were destroyed (VP023 2007).

We used to take the tugs up the river and moor them. Now we pile them in our slip out there and tie them up with crosswise ropes so they're secure. During Katrina we had the travel lift and took two tugs out of the water and put them up on blocks. We won't be doing that again. They floated off, there was a barge and two boats loose. What happened was the barge floated by and took off the front of the office building and one of the tugs took off the side. It's a miracle that we didn't lose everything. But in the end the boats were fine and because we had the travel lift we could get them back in the water. If we hadn't had it, we would have had to buy one (VP071 2008).

Smaller yards also have to address many of the same issues, simply at a different scale. A shipyard worker explained:

Back in Venice, we had to pack everything up . . . files, computers, welding machines, everything, and then we had to move all this s--, first to Belle Chasse, and then here permanently. Of course, we had to pack everything up for Gustav too. We took a bunch of stuff with us, but by now we're getting pretty good at it. We don't take everything, just the critical stuff like hard drives from the computer instead of the whole thing (BM138 2008).

The accumulated experience of dealing with the storm has given companies an opportunity to hone their strategies. They've learned from their mistakes or sub-optimal plans, and have modified their own plan of action on the basis of what works, what does not, and what does the best job of protecting what they need to protect.

Given their experiences with past storms, a number of companies had similar accumulated experiences they drew on for guidance, and many of them had specific plans that were quickly put into place after the storms. Many had their own generators and water supplies, and many of the yards and facilities were able to resume normal operations within a few days. The biggest slowdown occurred not as they waited for essential services such as water or electricity, but as noted above, as they waited for their core workforce to return. One company addressed this issue by actually providing secure housing on-site for its workers and their families, available to whomever chose to remain. A yard manager remarked:

We have a steel living quarters that sleeps about 45 . . . and if our guys stayed, they got free food, they had free AC, they had hot water, and they could stay here with their families . . . and that meant the day after the hurricane, they were back on the payroll and working. For the guys, staying here is a no-brainer. But some of their wives weren't so sure about it (BM059b 2008).

This arrangement benefited both the workers and the company, since workers were able to return to work and start earning their wages within just a few days of the storms passing, and the company did not need to wait for their workers to trickle back into town and to work. But not everyone had plans in place or knew exactly what to do with their workers, especially those that were providing housing for H-2B workers. One of the yard managers made a call to the local political office to inquire what they thought he should do with his H-2B workers. While it is positive that he was concerned and asking about what should be done with a group of people who do not know the area and may have little or no experience dealing with hurricanes, it was also telling that this phone call came with less than 24 hours before predicted landfall. Another official recounted the same story:

I'll be honest; I started to get worried about them. We had a guy from one of the shipyards around here that called me up and wanted to know what I thought he should do with his [foreign workers]. But he called on Sunday afternoon (note: *Gustav hit Monday morning*). And at that point there's not anything you can do . . . So, I don't know what he ended up doing (BM142 2008).

Those who do not provide housing for workers before or during the storm are sometimes forced to contend with worker housing after the storm, in particular if they are interested in getting the yard back up and running quickly, or to take advantage of any increase in business due to the storms. This observation came from a yard manager:

We lost the labor force immediately after the storm . . . when they came back there was no electricity, there was no social services, no grocery stores, very little utilities that were actually functioning . . . most people didn't want to come back, and those that did didn't have any place to stay. So we immediately worked to find housing, found some rental properties and some bunkhouses . . . we were in the housing business for a few months (BM004 2008).

Lack of housing was a serious issue for workers, who needed a place to stay, and the companies that needed their workers back and in a stable situation as soon as possible so as to

facilitate quickly going back online. This need for housing has meant that, at times, a number of companies have expanded into housing their workers as one of the many services or benefits that they provide, and the comment of one particular manager so aptly illustrated this when he stated, “I didn’t get into the business to be a f—king landlord” (BM064 2008). His frustration and exasperation with the situation aside, shelter from the storm is important, especially for those who are in company housing, and may have no other options, or not be aware of what those options are. In addition to upper managers feeling terrible about the loss of life, it would be a public relations nightmare if a group of workers met a tragic end due to poor planning and preparations on their part.

In sum, as companies face the impacts of storms on their facilities, their workforce, and their bottom line (either positively or negatively depending on the circumstances), many have chosen or have been forced to make decisions regarding strategies for mitigating the impacts of the storm, or to take advantage of available work in the aftermath.

7.2.4. Living in a Hurricane Region: Community Framing and Recruitment

In addition to the direct impacts on oil- and gas-related infrastructure, hurricanes also have a significant social impact on communities and residents, such as a displaced workforce following evacuations, damaged residential and commercial structures, interruptions in utilities and social services, and the traumatic effects that can cause widespread disruptions in communities that have been severely affected by a given storm. Hurricanes and their impacts are chaotic events, but there are attempts to characterize both the projected severity of the overall season, as well as the general potential of a given storm once it has started building intensity. These predictions center on trends and predictions for the overall storms (Figure 7.4), but the path and the subsequent impacts (e.g. social, environmental, economic, etc.) are notoriously difficult to accurately predict.

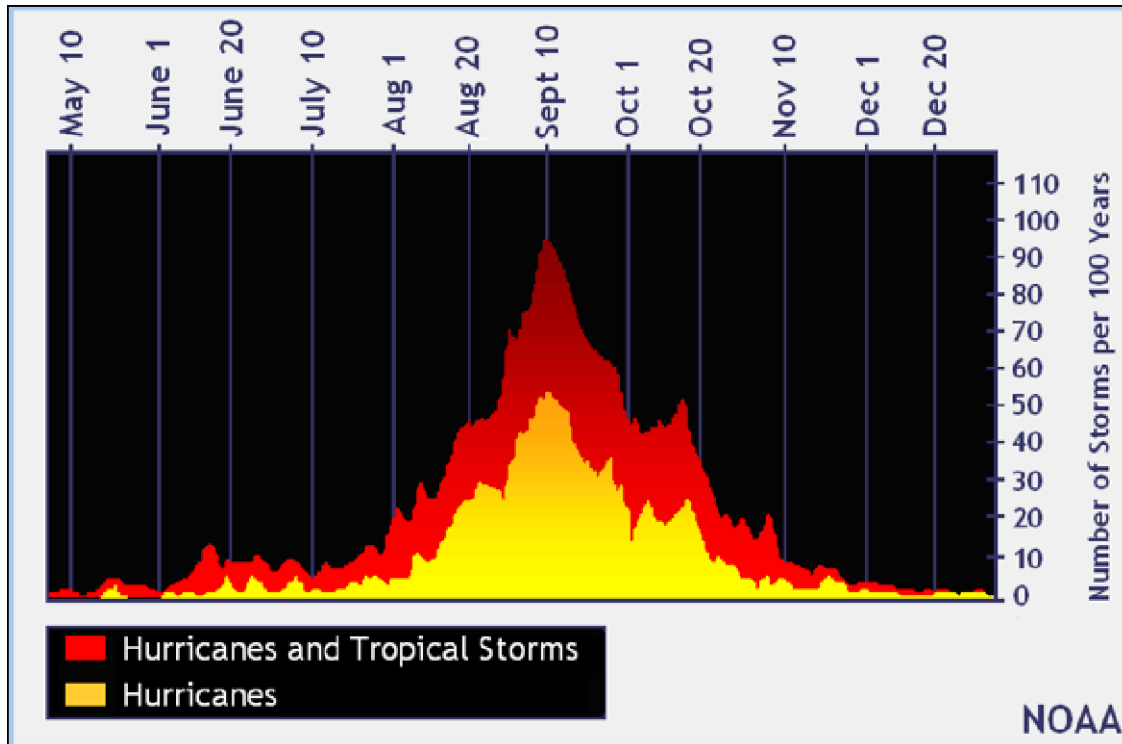


Figure 7.4. Trends in hurricanes and tropical storms.
Source: NOAA n.d.

While the storms are mostly products of chance, they are also affected by their context, and this goes a long way towards determining how severe a given storm might be, what sort of disruption it might cause, how much damage it might do, etc. Key factors include both the temporality and seasonality of the storms, as it matters both when they hit and whether other storms have already hit that season. Geography also plays a role, as the issue becomes not simply where the storms hit, but how they interact with local physical topography, in addition to what critical infrastructure or cities are located at the point of impact. Recent storms have also highlighted the tremendous impact of politics on response capacity, in particular, how local and national governments may or may not respond, as well as implications of these responses. Finally, the context of the community also shapes the impact of the storms, including residents' recent history dealing with storms, the relative demographic stability of the region, or the presence of a local industry that may drive a community's need or motivation for adequate preparation, since a successful response to a storm event can make a large economic difference, based on whether it takes two weeks, two months, or two years to get basic systems and services back up and running, as New Orleans has demonstrated since Katrina.

For the residents of these coastal communities, the prospect of living and working in a region that is affected by hurricanes is not merely an abstract notion of risk or vulnerability, but a real and tangible experience that is lived on a seasonal and yearly basis. By the time of the 2008 storms, the media coverage surrounding the storms of 2005 had attenuated. This was at once a novelty, a welcome change, and a frustrating reminder of the day to day reality of living and working in a region in which disaster impacts are, for the most part, invisible to the rest of the country, but whose products—oil and gas—are a critical component of the national economy. From the hurricane seasons of 2005 (Katrina, Rita) to 2008 (Dolly, Ike, Gustav), all of the field

sites were affected either directly or indirectly at least once by hurricanes and their aftermath, with some communities having been affected by multiple storms. Although none of the other storms caused the loss of life or received the media coverage that Katrina did, all had significant localized impacts, including:

1. Significant to catastrophic damage and destruction;
2. Disruption of basic services such as electricity and water;
3. Loss of, or damage to, local utilities and infrastructural capacity;
4. Disruption of local labor and materials supply, including the inundation of water and of refugees from nearby areas that had experienced more significant effects and were worse off;
5. The loss of local workers who moved into recovery, cleanup, or salvage work;
6. The presence of evacuees who might stay in the community to which they moved or absence of those who might never return; and
7. A general social upheaval that followed in the wake of the storms as residents tried to get their lives back in order.

For some regions, the impacts of the storms on local populations were minimal and the recovery was relatively quick (BM135 2008). For others, even nine to 12 months after a storm event, some communities were still dealing with the aftermath of these storms (Nolan 2009), with their recovery facing additional obstacles as finances tightened during the economic downturn that was developing in late 2008 and into 2009.

In addition to the overall impacts of hurricanes, there is another factor that affects the ability to fill in gaps in the workforce. The persistent and real threat of storms, along with the widespread media coverage of storms, especially in the wake of Katrina and Rita in 2005, may make the region less attractive for prospective workers. These workers may have been aware of the seasonal threat, but the persistent attention highlights the danger of the area, and media narratives often focus on the folly of living in such a region, given its propensity for significant hurricane impacts. As several yard managers noted,

The money [down here] is good, sure . . . but people don't want to leave their homes . . . they're afraid of change . . . and you have to ask yourself . . . what is their perception of this area. . . [regarding] hurricanes. . . . The hurricanes, they create lots of work, and in the business, there's no denying they make a lot of money. But if you're hurt or you lose your home, if it's flooded or damaged, it definitely hurts (BM059 2008).

To recruit someone from outside of the area would be the tough thing...I think it is the impression that you get on the news that it is not a place you would want to move to (PP029 2008).

Pre-Rita, they already had a hard time finding and keeping workers, but after it was only worse, which set them back on their schedule. Humberto didn't help either, because it reminded everyone of the potential of hurricanes . . . and this

potential for disaster affects people's psyche when they are thinking about whether they would want to live here or not (BM015 2008).

These quotes highlight both the material and the conceptual reasons that one might be disinclined to relocate to the Gulf Coast, regardless of potential pay levels. There are other mitigating factors as well, as one human resources director noted:

It's hard to [recruit people from out of state]. Why would people want to move here? Home insurance premiums have doubled since Katrina and Rita. It's not unusual to pay \$6-7K/year in homeowners insurance, which is hard to sell to people from out of state even if we also explain how much income they can make working here, which would counterbalance that financial commitment. There are other deterrents too—flooding risks, housing shortages (SR033 2008).

Even though there are numerous advantages and benefits to relocation, sometimes it's just not worth the hassle or the potential costs, especially given the seasonal impacts of hurricanes, on both actual and perceived levels of risk in the area.

And beyond recruitment *into* the area, there is the problem of retention of existing residents. As the cumulative impacts of storms build on individuals or families, people grow weary of the yearly strain of preparing for and dealing with hurricane season. While many have longstanding ties to the local communities, it may reach a point where people are willing to start over, and move on. A former fabrication worker from southern Louisiana and industrial engineer from Pascagoula shared the following:

A neighbor of mine had lived here [in Montegut] 47 years and recently moved to Bourg; they had been flooded four times, but the last time was the worst (two and a half feet of water in their house); she couldn't take it no more (HG005 2007).

I might move back to north Alabama to get away from the hurricanes. I've had enough of hurricanes. I went through the eye of Hugo in North Carolina, then I was in Florida for Ivan, went through the eye of that. I've been flooded out twice in Pascagoula. . . . Too many hurricanes (VP053 2008).

7.3. CONCLUSION

Hurricanes are chance events, shaped by context. This is a useful heuristic for understanding the impacts of hurricanes on the Gulf Coast communities, and the fabrication and shipbuilding companies contained within. There are a number of factors that are unpredictable, as hurricane paths are no more controllable than tornadoes, monsoons, tidal surges, or any other forces of nature that affect humans where they live and work. What can be considered, however, is context. And the context of coastal land loss, the proximity of fabrication and shipbuilding communities to the Gulf, and the symbiotic relationship between fabrication and repair companies, and the damages that hurricanes cause, can be considered as an assemblage of factors that shape the experience of random and chaotic events. So while hurricanes themselves are unpredictable and random, the potential impacts they could have on a community, were it to suffer a direct or glancing blow, are more predictable, based on prior knowledge, and the historical response of other communities in a similar situational context.

For better or worse, hurricanes drive the business of the fabrication industries in a manner that is difficult to replicate, and like their path, is for the most part unpredictable within a cone of uncertainty. There is no guarantee that a given storm event will drive expansions of work and growth of a given company, but those companies that are flexibly organized to rapidly scale up should the opportunity arise, will be better positioned to take advantage of the growth potential of hurricane-related business. This motivation to retain flexible labor strategies carries over into the types of labor that companies retain or adopt to keep up with changes, and strategies to provide temporary labor via H-2B visa workers, and independent contractors, is one way that companies utilize a flexible workforce to expand and contract with the industry. During up cycles, there is a pool of available labor, and when the down cycle occurs, companies have few resources invested in the temporary labor force.

In addition to responding to the rapid expansion of the industry, companies are also being pushed into other arenas, for which they have little experience, preparation, or desire. One such arena is that of worker housing, as companies are forced to consider not just who will be working for them, but where they will stay, especially in the event of a storm event. This provision of housing can operate as a recruitment tool, or as an added benefit to employees of a given company, or can simply exist as a practical necessity, such as the housing of foreign workers who are in the company on work visas. It is unlikely that any of the managers expected to be dealing with housing issues, and as some of the participants' comments demonstrate, some of them are less than enthusiastic about the added workload and responsibility this housing supervision entails.

Finally, and perhaps most unexpectedly, the relationship between the fabrication and shipbuilding industries demonstrated a somewhat unique impact on the level of community preparedness for the storms. While the companies did little to help residents or workers prepare for the impact of the storms, they did have a number of indirect impacts on preparation, as well as direct impacts on the speed with which the community was back up and running, in a relatively normal capacity. Companies were typically focused on their own preparedness capacity, in terms of acquiring generators or water supplies, but the speed with which the companies were back online and ready to allow workers to return to work, guaranteed that when workers were back, they would had jobs to return to. This forms an important safety net for residents, who might find it difficult, or at least daunting to return, when job statuses are up in the air along with possible housing damages or other casualty or loss associated with the storms.

In communities with a long history of dealing with hurricanes, the shared and accumulated experiences generate a certain familiarity with these situations, and what effective strategies to mitigate their impacts might look like. The industrial character of the region is fused with the community context, with strong parallels between communities that have a deeper set of experiences and understanding of strategies to employ in dealing with hurricanes and their aftermath, and local industry, which mirrors this level of understanding and preparation.

7.4. REFERENCES

- BM004. 2008. Personal communication. Housing for workers post hurricane. Discussion with Ben McMahan. Fabrication Yard Manager. Orange, TX. March 12.
- BM015. 2008. Personal communication. Perceptions of risk regarding hurricanes. Discussion with Ben McMahan. Fabrication Yard Safety Officer. Vidor, TX. April 16.
- BM028. 2008. Personal communication. Lack of skilled labors. Discussion with Ben McMahan. Vice President, Shipyard. Port Arthur, TX. April 28.
- BM031. 2008. Personal communication. After hurricanes rig repair business exploded. Discussion with Ben McMahan. Vice President, Shipyard. Port Arthur, TX. April 30.
- BM037. 2008. Personal communication. Impact of 2005 hurricanes on Orange. Discussion with Ben McMahan. Economic development coordinator. Orange, TX. March 5.
- BM043. 2008. Personal communication. Role of owners and management in facilitating return of employees. Discussion with Ben McMahan. Electrician and business manager. Port Arthur, TX. May 14.
- BM059. 2008. Personal communication. Business responses to hurricanes. Discussion with Ben McMahan. Fabrication yard manager. Morgan City, LA. June 5.
- BM059b. 2008. Personal communication. Follow-up. Discussion with Ben McMahan. Fabrication yard manager. Morgan City, LA. October 13.
- BM064. 2008. Personal communication. Experiences working in the shipbuilding and fabrication industry. Discussion with Ben McMahan. Contract Division. Amelia, LA. June 10.
- BM122. 2008. Personal communication. Workforce return post hurricane. Discussion with Ben McMahan. Fabrication yard vice president. Morgan City, LA. September 23.
- BM133. 2008. Personal communication. Workforce transitions post hurricane. Discussion with Ben McMahan. Fabrication yard project manager. Morgan City, LA. October 8.
- BM135. 2008. Personal communication. Quick recovery after Hurricane Gustav. Discussion with Ben McMahan. Political official. Morgan City, LA. October 9.
- BM138. 2008. Personal communication. Work on a shipyard. Discussion with Ben McMahan. Yard worker. Morgan City, LA. October 14.
- BM142. 2008. Personal communication. Responding to hurricanes. Discussion with Ben McMahan. Regional director, Office of Emergency Preparedness. Southern Louisiana. October 17.

- Collier Stephen J and Andrew Lakoff. 2008. Distributed preparedness: the spatial logic of domestic security in the United States. *Environment and Planning D: Society and Space* 26(1):7-28.
- Edmondson, B. 2008. American Diaspora. Internet website: <http://.epodunk.com///.html>.
- Freudenburg, William R., Robert Gramling, Shirley Laska and Kai T. Erikson. 2009. *Catastrophe in the Making: The Engineering of Katrina and the Disasters of Tomorrow*. Washington, DC: Island Press.
- HG005. 2007. Personal communication. Friend moving because of floods. Discussion with Heather Gallivan. Former fabrication worker. Montegut, LA. June 20.
- JC009. 2007. Personal communication. After storms everything has been in short supply. Discussion with Jacob Campbell. General Manger of shipyard. Larose, LA. July 17.
- JC011. 2007. Personal communication. Experiences working in grandfather's shipyard. Discussion with Jacob Campbell. Sales and marketing. Patterson, LA. July 18.
- Johnson, K. 2007. Post-Katrina Baton Rouge Struggles with its Identity. Internet website: http://.usatoday.com///baton-rouge-cover_x.htm.
- Lakoff, Andrew. 2006. From Disaster to Catastrophe: The Limits of Preparedness. SSRC preparedness page. Internet website: <http://ssrc.org>.
- National Oceanic and Atmospheric Administration (NOAA). n.d. Number of Tropical Cyclones per 100 Years. National Hurricane Center, National Weather Service. Internet website: <http://.nhc.noaa.gov//>. Accessed March 12, 2012.
- Nolan, H. 2009. Bridge City Businesses Starting to Re-Open After Ike. *Beaumont Enterprise*. Jan. 17.
- PP029. 2008. Personal communication. Perspective on jobs after Katrina. Discussion with Preetam Prakash. Manager of a fabrication yard. Moss Point, MS. July 8.
- PP034. 2008. Personal communication. 18 month stretch where we had a good level of work. Discussion with Preetam Prakash. President of ship repair company. Moss Point, MS. July 7.
- PP038. 2008. Personal communication. Doing a great deal of business after Katrina. Discussion with Preetam Prakash. Sales and Marketing. Moss Point, MS. July 7.
- PP058. 2008. Personal communication. Perspective on jobs after Katrina. Discussion with Preetam Prakash. Manager of a fabrication yard. Mobile, AL. July 23.
- PP066. 2008. Personal communication. Perspective on jobs after Katrina. Discussion with Preetam Prakash. Manager of a fabrication yard. Escatawpha, MS. July 17.

- PP070. 2008. Personal communication. Natural disasters will get your business. Discussion with Preetam Prakash. Owner of a Shipyard. Moss Point, MS. July 24.
- Rigzone. 2008. Platforms Destroyed Now Number 49. September 19. Internet website: <http://.rigzone.com///.asp>.
- SR033. 2008. Personal communication. Hard to recruit people from out of state. Discussion with Sarah Raskin. Human Resources. Houma, LA. July 31.
- Minerals Management Service (MMS). 2006. MMS Updates Hurricanes Katrina and Rita Damage. May 1. Internet website: <http://.boemre.gov////.htm>.
- VP023. 2007. Personal communication. Evacuation team to evacuate the movable equipment. Discussion with Victoria Phaneuf. Shipyard owner. Bayou La Batre, AL. July 23.
- VP053. 2008. Personal communication. Had enough of the hurricanes. Discussion with Victoria Phaneuf. Industrial Engineer. Pascagoula, MS. April 16.
- VP071. 2008. Personal communication. Perspective on jobs after Katrina. Discussion with Victoria Phaneuf. Human Resources and Safety Manager. Pascagoula, MS. May 19.
- VP080. 2008. Personal communication. Perspective on jobs after Katrina. Discussion with Victoria Phaneuf. Manager of a fabrication yard. Bayou La Batre, AL. May 29.



The Department of the Interior Mission

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities and for people who live in island communities.

The Bureau of Ocean Energy Management Mission

The Bureau of Ocean Energy Management (BOEM) works to manage the exploration and development of the nation's offshore resources in a way that appropriately balances economic development, energy independence, and environmental protection through oil and gas leases, renewable energy development and environmental reviews and studies.