The Fish Order of Nineteenth Century Bengal: Contracting and Colonialism in the Gangetic Delta

by

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Introduction

From Swerve of Shore to Bend of Bay

The fish of the Gangetic delta are, like those in many other areas of the world, part of a bigger plan. Even the *bilsa*—“the king of fish”—as it goes about its largely inscrutable life in the murky depths of the Padma River, is by no means king of its own destiny. Its destiny is, rather, tied up in the plans of the people who live above. After all, the *bilsa* are not called “king of the fish” because of their strength, size, martial prowess, or anything of the sort; rather, they are so called because of how good they taste to the Bengali people above. Indeed, the fish of the Gangetic delta—even as they are buffeted about by the intractable flows of the great rivers, struggling to survive and reproduce—are part of a great order that has developed around the wants and preferences of the people who live in the lands around them.

The “plan” I am referring to here is perhaps more accurately seen as the intersection of several different plans. The totality of these intersecting plans forms a kind of order: the order of supply and demand. To put things more concretely, even as the *bilsa* fish go about their lives in the Padma, they are on the minds of a Bengali family planning their meals for the next day. The fishmonger, knowing his clientele, has likewise already accounted for the fact that some of these *bilsa* will be sold at his stall the next morning. Indeed, a series of wholesalers, merchants, and specialist suppliers have, like the family and the fishmonger, incorporated some of these *bilsa*—while they still swim about in the Padma—into their plans for the next day. At the moment that fish are caught—whether onto a trawler in the Bay of Bengal, by a group of traditional fishermen in the Hooghly, or in an inland fish farm—they finally physically enter the processes of
the markets. Indeed, these market processes in aggregate give rise to a certain ordered flow of goods that, in a sense, has the same relentless current as the Hooghly or Padma wherein these fish once roamed.

What I call the fish order is the order of exchange and ownership of fish in Bengal. Importantly, the market processes described above, alone and in isolation, do not define the fish order. This is because the structure of markets is itself ultimately determined by the system of property and law that regulate patterns of ownership and, more generally, the behavior of individuals. Moreover, technological changes can have profound impacts on the operation of markets and peoples’ preferences for goods. Cultural aspects too, as I show in chapter two, have historically played a part in determining the structure of the fish order.¹ What I am calling the fish order is thus an instance of what Greif calls an “institutional equilibrium.”² That is to say, rules and norms originating in a variety of sources—from the functional logic of means and ends exemplified in the theory of utility maximization and supply and demand to peculiar cultural practices to formal legal systems—come to govern certain stable regularities of behavior. The study of the fish order is the study of the relevant regularities of behavior that center on the ownership and exchange of fish in Bengal.

What follows is an essay in economic history. I look at the evolution of the fish order through the early period of British colonialism in Bengal. The uniting thread of the paper is an analysis of the evolution of property rights surrounding fish through the nineteenth century, culminating in the passage of the Private Fisheries Protection Act of

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¹ This view, seating economic activity within a broader social context, follows the “substantivist” account advanced by Polanyi. See, for example, Polanyi, Karl, Conrad M. Arensberg, and Harry W. Pearson, Trade and Market in the Early Empires, New York: The Free Press, 1957.

1889. But, because the fish order is ultimately determined by a confluence of diverse
social factors, my method of analysis naturally leads to a broadening of scope. That is to
say, through the analysis of one commodity—fish—we are ultimately able to better
understand aspects of the broader society. Indeed, in order to better understand the
commodity, we must try to understand the relevant aspects of the society that exchanges
and consumes it. In this case, the history of property rights has important implications
for the story of colonialism and its impact on Bengali communities. I do not assume that
institutions of governance, laws, culture, or any other social factors influence market
processes. Rather, I hope to show exactly how regularities of behavior came to be
established, fall apart, and change in the fish order of colonial Bengal. And this project
entails showing how, in colonial Bengal, institutional and cultural aspects were inextricably
tied to the development of systems of exchange. In the following sections I outline the
personal and theoretical motivations for this project and situate it in the broader
literature on institutional economics. I go on to explain my method, which, while not
radical, is somewhat novel in its multifaceted approach. In this paper, I use the theory of
relational contracts, classical game theory, an economic analysis of a legal rule, and
various other tools from across the social sciences to better understand the fish order.
Motivations

To say that fish are a culturally significant commodity for Bengalis is an understatement. The eating of fish is part of what it is to be a Bengali, and this makes sense for a culture that has developed around the largest river delta in the world. As a Bengali, I have fond memories of eating grandma’s many fish preparations, visiting the fish market in the morning, and even once going to a *hilsa* festival, which involved eating six or seven different preparations of the fish while on a riverboat on the Ganges. This past summer when I asked my grandfather if he had any worldly wisdom he could share with me after his 85 or so years, his only response was “fish curry and rice.” Indeed, through all the tumult of the twentieth century, during which time Bengal saw famine, war, independence, partition, insurgency, and communal riots, the comforts of the generationally passed-down fish preparations has been a constant. The West Bengal Department of Fisheries estimates the demand for inland fish in the Indian state of West Bengal to have been 1,629,000 tons in 2007-2008.

An important motivation for this project thus stems from a desire to better understand my own heritage. The idea of studying fish as a commodity arose from my many visits to the fish markets of Calcutta where I found the hubbub of economic activity to be inscrutable. Try as I might, I could not make out the order that I knew to

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exist under the ostensibly absurd comings and goings of merchants, laborers, and customers. “Economic planning,” to my mind, was a man in a Brooks Brothers suit and geometric tie reading a laminated set of graphs and charts with a Starbucks coffee and the Financial Times perched on his desk. How could it also be embodied in a shirtless Bengali fishmonger swatting flies off his paunch in an open-air market while a stray dog lingers for scraps of hilsa guts at his feet? Questions like these led me to look closer at the fish markets of Calcutta and attempt to uncover their logic. Eventually I began to delve more specifically into the history of fishing rights, a particularly interesting topic for me and one more amenable to being studied from Middletown, Connecticut. The institutional history of the fish order thus became my topic of study; it grabbed my attention last summer, has held on through the process of writing this essay, and my analysis of this general topic has led me to some surprising and illuminating areas of inquiry that appear throughout this essay.

However, the motivation for this essay is by no means purely personal. The fact that fish are such a culturally significant commodity in Bengal, for one, makes it an interesting topic of study in its own right. How does trade in such a culturally significant commodity differ from trade in other goods? This is an immediate question that is raised and one that I consider in a section in chapter two of this essay. But the significance of this project goes beyond the topic of culturally significant commodities; the essential questions that this paper is concerned with have to do with institutions and how they impact patterns of exchange and ownership. Institutions in much of the literature refer

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5 To name a few important albeit less colorful ones: How are fish priced? How is the supply chain structured?
generally to “the rules of structured social interaction.” However, for us, following Greif, an important motivation is determining how these rules come to form behavioral regularities, or in other cases, how they fail to form desired behavioral regularities. Our interest in the determinants of the behavioral regularities that define the fish order thus leads to a shift in focus from “institutions as rules” to “institutions as equilibria,” where by “equilibrium” I simply mean behavioral regularity. Rules of structured social interaction remain an important component on this view of institutions and they remain part of what institutions are. But, these rules are now contextualized by factors such as technology, geography, and demography, which influence how effective the rules are at forming stable equilibria. All of these factors motivate and constrain individuals in important ways as they epiphenomenally compose the superstructures of exchange and economic order.

Throughout the paper the history of the fish order is considered on its own terms, without much of the baggage of specialized language being introduced here—indeed, even the word “institution” is seldom used. After this introduction, there will be few further meditations on matters of abstract theory; the focus will be on actually doing the analysis and explicating the specific questions at hand in an easily intelligible way. However, there are some broader theoretical questions, which, while not explicitly referred to, nevertheless guide the analysis and are worth keeping in mind. How do we study institutions? How do we explain persistence in systems of rules that regulate economic behavior? How do we study change in the structure of exchange relations?

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7 By Greif, “an institution is a system of social factors that conjointly generate a regularity of behavior.” Greif, Ávner, Institutions and the Path to the Modern Economy, Cambridge: Cambridge University Press, 2006, p. 30.
And how do the various factors—legal, technological, cultural, political, and demographic—that regulate systems of exchange influence one another? These are the essential questions I am concerned with throughout this paper.

Much econometric work has been done suggesting that institutions have an impact on income or other economic indicators. However, as Greif points out, identifying such correlations is not sufficient for understanding institutions. Rather, in order to better understand institutions, we need to identify and match causes and effects and uncover the causal mechanisms at play in the stability and transition of systems of economic organization. The method of analysis done here, I hope, can at least go some of the distance in furthering our understanding of how systems of law, governance, culture, and the like come to impact economic organization and outcomes. And, in so doing, I hope that it will contribute to the broader literature on institutional economics.

Method

Contracting is central to my analysis. Why do people contract in observed ways? What obstacles do they face in consummating exchanges? And how do they overcome these obstacles? These will be the central questions propelling the analysis. While there is no single model that guides my analysis, the analytic tool of the relational contract will be of

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special significance. Relational contracts, as described by MacNeil,\(^{10}\) are contracts within which a primary aim is the long-term preservation of the relationship between the contractors. They are built to secure future transactions between the parties involved. As such, they often involve significant discretionary aspects, and the cultivation of trust between the contracting parties is of great importance. Relational contracts arise in a variety of contexts in the following analysis: they are central to the stability of the pre-colonial fish order, they play an important part in the granting of credit among Bengali merchants, and even turn out to be an important angle in the story of colonialism in Bengal.

One effect of using the relational contract as an analytic tool is that we move away from the neoclassical picture of agents as abstractions contracting in a frictionless environment. Rather, in relational systems contracting parties may know each other personally; each exchange is contextualized within a rich backdrop of previous exchanges, which, as I briefly explore in chapter two, may give rise to considerations related to justice and right. Within this framework, our focus is soon drawn to impediments to contracting that may emerge. Indeed, relational contracting may lead to different ways of solving contracting problems, such as the asymmetric information problem of chapter one, and dealing with transactions costs, as detailed in chapter three. The analytic tool of the relational contract allows us to add a social dimension to contracting and exchange. To that end, I show that reputational systems, rituals of gift exchange, and the elements of the colonial legal apparatus as a whole—all important and powerful social constructs—can be understood as outgrowths of various relational

contracts. As will become clear, isolated exchanges are not of great interest to us given the topic at hand—rather, we are interested in exchanges contextualized in broader relationships that have, in turn, been defined by previous exchanges. Understanding the nature of these relationships, the factors that lead them to endure and change, and their power in regulating behavior are all central to our institutional analysis of the fish order.

Another important analytic tool used throughout the paper is game theory.\textsuperscript{11} Game theory allows us to pinpoint, for example, the enforcement problems analyzed in chapters one, two, and four. It helps answer an important question that is raised at various times in the essay: in the absence of third-party enforcement how are relational contracts enforced? Game theory helps us understand how contracts can be made self-enforcing. That is, it helps us understand how incentives can be placed in such a way as to facilitate a stable contractual outcome without third party enforcement. The concept of self-enforcement, as will become clear through the analysis, is particularly important in understanding the modalities of stability and change in institutional order. As long as an outcome is self-enforcing, it tends to persist, but as incentive structures evolve with a changing socio-economic environment, behavioral regularities can give way to flux. In general, the language of game theory is useful in the study of contracting problems; it helps identify potential impediments to the successful implementation of a contract and also points to ways in which these can be solved. In chapter two, I use game theory to explain certain significant shifts in the fish order and show why conflict between the landowning and peasant classes of Bengal might have become more common through the nineteenth century. Game theory complements our analysis of relational contracts and gives us a framework for identifying casual mechanisms in both the stability and

\textsuperscript{11} In this regard, this paper follows the method of Greif, Avner, \textit{Institutions and the Path to the Modern Economy}, Cambridge: Cambridge University Press, 2006.
instability of the behavioral regularities that define the fish order. It allows us to analytically deal with the motivations and constraints on individual behavior that, in aggregate, determine the fish order.

Data

Since this paper is an analytic history, the primary focus is on the analysis. Consequently, important historiographical questions might not get the full consideration that they deserve. This is a particularly important concern for us given how contentious and charged aspects of the history of colonialism still are—a variety of histories exist, and they represent a host of divergent points of views.12 I hope to get around potential problems that might arise from the state of the historiography of colonial Bengal by critically engaging with the data and drawing from a variety of different sources. An important primary source is Buchanan-Hamilton, whose 1807 statistical survey of a Bengali district gives valuable information on the ways of life of early nineteenth century Bengalis.13 In using Buchanan-Hamilton, I avoid the more contentious areas of his work, such as the statistical tables,14 and rely instead on simple observations that likely seemed innocuous flourishes of detail to the author and are likely devoid of any political agenda. Other contributions to the picture of 1800s life in Bengal come from a variety of

sources, including Guha’s subaltern historiography, Stokes’s history of colonial government, and Nakazato’s history of agrarian Bengal.\textsuperscript{15} Our interest in these works is mostly limited to the fact that they bring us into contact with a variety of authoritative primary sources from which our image of the colonial fish order emerges. Court cases, legislation, and other articles of colonial policy are also central to our analysis.

In general, the job of our data here is to paint a picture of various important aspects of the fish order. The analysis proceeds by connecting aspects related to exchange, economic organization, and various facets of social life—our “givens”—and illustrating either the ways in which they might have come together to form the fish order or, in other circumstances, how they might have caused disruptions and change in the fish order. To put it very generally, our data gives us a picture of the colonial fish order that at first glance might evade easy interpretation. But once we have this picture, the analysis proceeds by making it intelligible through our toolbox of relational contracts, game theory, and other analytic devices. Thus the style is perhaps typical of a study in political economy. The approach of this paper, which I have detailed in abstract terms in the last few sections, will, I hope, become abundantly clear through the actual analysis that follows.

Here Comes the Fish Order

The flow of the paper is charted by a study of the evolution of property rights surrounding fish in Bengal. This property right analysis is a framing narrative of sorts and serves to tie the four chapters together. In the first chapter, we find our feet in the fish order and examine the first stage of the evolution of fishing rights. Certain basic elements of the history of Bengal and the structure of British government are introduced, and pre-colonial norms of customary fishing are examined. I look at the motivations behind the customary regime and analyze ways in which it might have been made into a stable outcome. In the second chapter, I look at how the customary order fell apart. I develop, as far as I know, an original theory to explain shifts in the bargaining position of the landowning and peasant classes and the eventual emergence of significant conflict. I consider how cultural aspects might have played into how fish markets developed in Bengal and examine how norms concerning justice and fairness might have arisen in the relevant relational contracting systems.

The third and fourth chapters begin to move away from the Bengali village and deal more directly with the colonial government. Chapter three is an examination of a legal rule developed by the High Court of Calcutta in the 1880s to address the growing conflict over fishing rights. I explore the relevant court cases, perform an economic analysis, and point to the broader implications of the Court’s actions and way of thinking for the Bengali people. I note how the Court’s rule could have effectively solved the disputes involving fishing rights and had an ultimately community-enhancing effect. In concluding the analysis, chapter four puts us firmly in the great halls of the imperial regime and brings us face to face with certain grim realities of colonialism in Bengal. I analyze the Private Fisheries Protection Act of 1889, which overturned the Court’s ruling
on the fisheries matter, and use this analysis to advance a more general understanding of colonialism in Bengal. In ending chapter four, I elucidate the various mechanisms, revealed by the preceding analysis, by which colonial capitalism had a destructive influence on Bengali communities. And by the end of chapter four, with the passage of the Private Fisheries Protection Act, we reach a natural point of resolution in our framing narrative. The story that follows examines colonialism and contracting in nineteenth century Bengal by investigating the structures of exchange and ownership over fish.
Finding Our Feet in the Fish Order
Early Administration and the Customary Regime

Introduction

Finding Our Feet

The setting at hand is undoubtedly an unfamiliar one for many readers. Much of the literature in economics on the evolution of property rights and institutions is focused on the rise of the West.\(^1\) Indeed, even in development economics, where the object of study is the contemporary less-developed country, the familiar story of the rise of the West looms large in the background.\(^2\) While this essay is not about the rise of the West, since the setting is colonial Bengal, the West—Britain more specifically—is an important player. Britain here, however, is a distant imperial power and its voice is that of its often long-forgotten emissaries. Importantly, under the project of imperialism, many of the familiar conceptual relationships of right, property, law, and so on are turned on their heads. For example, for men like Alexander Dow, an orientalist and East India Company officer, property in India, far from being a natural right, was a way to ensure servitude; he wrote of the Indians, “To give them property would only bind them with stronger ties

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to our interest, and make them more our subjects; or if the British nation prefers the name—more our slaves.”

The situation, then, in addition to being unfamiliar, is complicated. It is complicated by contemporaneous and competing systems of law and government—broadly, traditional and customary systems as against the new apparatus of the colonizing power. And, as illustrated by the words of Dow, it is further complicated by the inherent ambiguities of a colonial system that, on the one hand, imported its principles of justice and right while, on the other, often bent their meanings and applications to best suit the project of colonization. These complications make this case particularly interesting for study, but they do raise some difficulties for the analysis to be done here. Broadly, the work of this paper is in detailing and understanding the evolution of property rights surrounding fisheries in Bengal and, specifically, examining the interconnections between the economic, legal, and social aspects of the fish order. This chapter will be most directly concerned with understanding the customary system of fishery use in Bengal and its tensions with the formalized property rights regime that the British brought. In order to do this, however, we must have the vocabulary to interpret and make sense of behaviors, motivations, and the important organizations that are operative in this specific case. What we need to do, to borrow a phrase from the sociologist Clifford Geertz, is to “find our feet” in the world of nineteenth century colonial Bengal.

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3 Dow, Alexander, *The History of Hindostan from the Death of Akbar to the Complete Settlement of the Empire Under Aurungzebe* to which are Prefixed, I. A Dissertation on the Origin and Nature of Despotism in Hindostan, II. An Enquiry into the State of Bengal; With a Plan of Restoring that Kingdom to its Former Prosperity and Splendor, London: John Murray, 1792, p. clv.

Aspects of the Evolution of British Administration in Bengal

Permanent Settlement and Zamindari Land Ownership

The formal system of land ownership that existed in Bengal by the late nineteenth century was a result of concerted policy initiatives by the British. This system, known as the *zamindari* system after the class of landowners known as *zamindars*, was central to British colonial policy in the region; the *zamindari* system had important implications for the British administrative apparatus, their thinking on property rights, and ultimately the structure of Bengali society as a whole. A brief account of the development of this system will be necessary in order to ultimately interpret and understand the contemporaneous evolution of property rights in fisheries in Bengal.

Our story begins at the consolidation of East India Company rule over Bengal. The Company had purchased Calcutta in 1698 from the Mughals; after the Battle of Plassey in 1757 and the Battle of Buxar in 1764, John Company, as it was popularly known, had gained control over much of the province from the declining Mughal Empire. By 1800, the East India Company ruled over large sections of the Indian subcontinent and faced the challenge of administering tens of millions of people while extracting revenue from a land that was many times the size of the British Isles. Given the vastness of the land and the multitude and complexity of the cultures and societies of its people, effective administration proved too great a challenge for Company officials. Corruption, mismanagement, and abuse of power—both by Englishmen and their native delegates—were rampant; Jeremy Bentham, the father of utilitarianism, succinctly describes the situation in a 1782 essay:

> At present, it has been said, the passion of avarice has implanted among the inhabitants of English race in Bengal, two evil propensities: a propensity to
practice extortion, to the prejudice of the subjected Asiatics; and a propensity
to practice peculation, to the prejudice of the public revenue. Hence arises in a
sort of tacit convention and combination on the part of every man, to support,
assist, and protect every other in the practice of the like enormities.\(^5\)

The dire state of affairs in Bengal came to the attention of men like Bentham and
the British public at large after a famine in 1770 killed, by some accounts, a full third of
the population of the province.\(^6\) The negative press brought on by the famine was
compounded by the financial difficulties facing the East India Company and the threat
of a French invasion of India.\(^7\) Calls for reform and Parliamentary intervention in what
had hitherto been a private expedition were growing and the issue engaged many of the
great political thinkers of the time. Indeed, it was against this backdrop that our friend
Dow, a Scotsman of sufficient standing to carry on correspondences with David Hume
and Lord Mansfield,\(^8\) wrote about property as a means of binding Indians to British
interests.

Parliament, responding to the public outcry, passed the Regulating Act of 1773.
Under this act, the East India Company was brought under a degree of governmental
supervision and Warren Hastings, an experienced Company official, was made
Governor-General of Bengal. Hastings laid out a new and ill fated “revenue farming”
system—estates were publicly auctioned in five year intervals to the highest bidder.
Revenue farming proved disastrous; there were manifestly no incentives for ensuring

\(^5\) Bentham, Jeremy, “Essay on the Influence of Time and Place in Matters of
\(^6\) See Dutt, Romesh Chunder, The Economic History of India Under Early British Rule: From
the Rise of the British Power in 1757, to the Accession of Queen Victoria in 1837, London: Kegan
Paul, Trench, Trubner & Co., 1908, p. 5.
\(^7\) Guha, Ranajit, A Rule of Property for Bengal, Paris: Moulton and Co., 1963, p. 20
\(^8\) Ibid, p. 21.
long-term improvement of the land and security of landed property was seriously
diminished. Corruption and abuses of power, additionally, remained rampant in Bengal.
At the end of the revenue farming experiment arrears of land revenue had exceeded two
million pounds in aggregate. Hastings, on his return to England, would become
somewhat of a scapegoat for the failures of British policy in India; Edmund Burke
charged him in 1787 with a series of crimes relating to corrupt practices in Bengal.
While that protracted scandal captivated the British public, their nation’s policy on land
rights in Bengal, informed by the disastrous consequences of revenue farming, continued
to evolve in a different direction.

The enduring result of the Hastings fiasco, and the perceived solution to the
broader question of land rights and revenue, was the Permanent Settlement of Bengal in
1793. The Permanent Settlement fixed revenues to be collected by the British in
perpetuity and granted the landholding class full proprietary rights over their lands
forever. Article III of this proclamation, issued by then Governor-General Cornwallis—
of American Revolution fame—reads as follows:

The governor general in council accordingly declares to the zemindars,

independent talookdars and other actual proprietors of land, with or on behalf

of whom a settlement has been concluded under the regulations above

mentioned, that at the expiration of the term of the settlement, no alteration

will be made in the assessment which they have respectively engaged to pay,

but that they and their heirs and lawful successors will be allowed to hold their

estates at such assessment for ever.11

10 Hastings was ultimately acquitted in 1795, after a seven-year long trial.
11 Firminger, Walter Kelly, The Fifth Report...on the affairs of the East India Company...1812,
vol. I, Calcutta, 1913, p. 36 quoted in Guha, Ranajit, A Rule of Property for Bengal, Paris:
Moulton and Co., 1963, p. 11.
The British administration had, following the advice of men like Dow, created a landowning class—the zamindars—who derived their rights to their land from British rule. And so, it was hoped, the interests of this class of Indians would be bound up with the interests of the British and British power would take root within the fabric of Bengali society.

Permanent Settlement was by no means a new idea in 1793. Championed by Dow and advanced by, amongst others, Philip Francis, an arch nemesis of Hastings’, the ideas of Permanent Settlement had been raised since at least 1770. While the Permanent Settlement provided a solution to the most immediate problem of securing revenue, its significance goes well beyond that pecuniary concern. Dow, writing in 1770, already alludes to Permanent Settlement—giving the Indians property—as an exercise in a kind of social engineering. Francis, whose plan of 1776 anticipated the central ideas of Permanent Settlement, also set his sights high; the goal, for him, was “saving” Bengal rather than simply sorting out the administrative matter of revenue. As Guha points out, Francis’ plan was “more a philosophical statement than a mere administrative minute” indeed, the same can be said for Cornwallis’ proclamation of Permanent Settlement.

By the 1880’s the zamindari system, as established through the Permanent Settlement of Bengal, was a time-honored and central policy of British rule. The zamindari class was, by then, the source of much of the intellectual and cultural awakening that would come to be known as the Bengal Renaissance. More importantly for us, this group, represented by the British Indian Association, wielded considerable

13 Ibid, p. 90.
14 Ibid, p. 91.
political power. As will be discussed in depth later, the British Indian Association lobbied for the Private Fisheries Act of 1889. This act was a milestone in the development of fishery rights in the region and will be central to this study.

The Structure and Evolution of the Judiciary

I have hinted above at the curious ways in which concepts and systems of right, property, and law were applied to the context of colonial Bengal; Dow’s view of property as a means to enslavement is perhaps the paradigmatic statement of this way of doing policy. One would expect then that the courts, as arbiters of justice and right, would have played a central role in the broader ambiguity and confusion that characterized important aspects of British rule over Indians. Indeed, these ambiguities would make the colonial judiciary importantly distinct from a judiciary that responds more directly to “we the people.” The courts and the judicial system at large are, of course, central to this study. It will, therefore, be necessary to have a basic sense of how they operated, confusions and idiosyncrasies and all, so that we may later be able to interpret casework.

The Indian Mutiny of 1857 was a key moment in the development of an Indian judiciary. While Bengal remained comparatively peaceful during the rebellion, the brutal violence and upturning of British authority in other parts of the country ushered in a period of significant reform. For one, the Crown finally took over direct control of the Indian colonies from the East India Company and proceeded to significantly alter the judicial system of the country. To that end, the Calcutta High Court was established in 1861 after the Indian High Courts Act was passed by Parliament in response to the mutiny. During the years of Company rule, the Crown-controlled Supreme Court at Calcutta had administered English law while the Company-controlled Sadr Diwani
Adalat and the Sadr Nizamat Adalat had been set up to administer Muslim and Hindu
civil and criminal law respectively.\textsuperscript{15} Even the Company-administered courts, however,
were under the appellate jurisdiction of the Judicial Committee of the Privy Council in
London. And under this pressure, John Company had increasingly appointed qualified
men to judicial positions.\textsuperscript{16} For some years before the Mutiny, there had thus been a
trend away from a judiciary that was completely subsumed by the arbitrary executive
power of the Company or their local delegates towards one that at least gave the
impression of appealing to independent sources of legal authority, be they crude and
distorted interpretations of Hindu \textit{shastras}\textsuperscript{17} or earnest application of English law. The
High Courts Act of 1861 further solidified this trend.

Under the High Courts Act, the system of the competing Sadr courts and the
Supreme Court was abolished and a unified judiciary, under the control of the Crown,
was instituted. The highest court in Bengal, the High Court of Calcutta, was by the 1880s
composed of promising English barristers like William Markby and Richard Garth.
While Markby had distinguished himself with a first class degree in mathematics from
Oxford and would go on to become a legal scholar of some repute, Garth, after
completing his schooling at Eton, had captained the Oxford cricket team and was
already an MP prior to serving on the Calcutta High Court.\textsuperscript{18} In addition, there were,
increasingly, men like Chunder Madhub Ghose—an Indian, part of the inaugural class of

\textsuperscript{15} This system was due to reforms passed by Hastings after the Regulating Act of 1773. On British legal thinking regarding indigenous systems of law—especially the historical importance of religion in Indian law, see Derret, J.D.M., \textit{Religion, Law and the State in India}, New York: The Free Press.
\textsuperscript{16} Ibid, p. 276.
\textsuperscript{17} On the reasons for the British reliance on Classical Hindu law treatises as a source of legitimate legal authority see ibid, chapter 8.
Calcutta University in 1857, and a capable and highly educated lawyer and jurist who had more than paid his dues with years of service in the lower Sadr courts. While the High Court represented the forefront of legal scholarship, the lower courts were still staffed by laymen. The cases at issue regarding fishery rights were all first decided—that is, before appeal—by magistrates who were local administrative officers and other long-forgotten representatives of British authority with varying judicial knowledge.

So, the Calcutta High Court was, at the time of the fishery cases, a fairly independent authority staffed by distinguished jurists thoroughly trained in English law. While the Dow-inspired Permanent Settlement remained in force, Dow’s 1770 appeal to slavery, the most crude of master-subject relationships, as typifying relations between the English and Bengalis no longer fit most British thinking a century later. After all, Britain was now sending its best and brightest across the world to establish justice, right, and law in India. Reformist zeal and salvation fantasies, overflowing in men like Philip Francis, had perhaps won out over Dow’s cold strategizing—whatever the cause, the change was obvious. At Hastings’ impeachment proceeding, Edmund Burke had cast himself as something of a Georgian-era Diodotus—pleading for the colonized in the court of the colonizer: “Justice will be done to India,” he implored, “The question is, not solely whether the prisoner at the bar be found innocent or be found guilty, but whether

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21 Indeed, one of the first Supreme Court judges to set foot in Calcutta in 1774 is said to have remarked upon seeing the barefoot natives, “I trust we shall not have been six months in the country before these victims of oppression are comfortably provided with shoes and stockings.” Marshman, John Clark, *History of India*, vol. I, p. 346 quoted in Guha, Ranajit, *A Rule of Property for Bengal*, Paris: Moulton and Co., 1963, p. 90.
22 Who, according to Thucydides, convincingly argued in Athens against the massacre of the recently conquered Mytilineans.
millions of mankind shall be miserable or happy.”

By the 1880s, considerations of justice for the Indian people had, at least as manifested in the colonial institutional structure, advanced from the days when seeking immediate advantage and payoff were the norm of John Company’s behavior. Ambiguities and confusions, however, would remain central to this process of administering justice and right through the inherently exploitative institutional framework of imperialism.

The Indian Penal Code

The Indian Penal Code is central to the question of fishery rights and it is the last piece of set to be laid in place before the drama of fishery rights is played out directly. When the question of fishery rights came before the High Court, the central difficulty at hand was what constitutes the theft of fish from a water body? The Code was the brainchild of Thomas Babington Macaulay, one of the most powerful administrators of early nineteenth century India. Macaulay had once famously declared, “I have never found one among them [advocates of Indian language and tradition] who could deny that a single shelf of a good European library was worth the whole native literature of India and Arabia.”

Macaulay’s Penal Code, after a long period of development and gestation, was enacted in 1862 as part of the post-Mutiny reforms and continues to form the basis of contemporary Indian criminal law.

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Jeremy Bentham—avidly interested in Indian affairs and, of course, systems of law—had already in 1782 tried to tackle the general problem of creating laws for disparate environments in his “Essay on the Influence of Time and Place in Matters of Legislation.” In that essay, Bentham uses English law as the basis from which a Bengali law can be systematically derived. His description of the process is sardonic, mocking the premise that England would have a perfect set of laws:

This, then, is the hypothesis: —The laws which I would propose are established in this my country; and they are, of course, according to my conception of them, the best that can be devised. In this magnificent and presumptuous dream I indulge myself without controul; and in it, for the purpose of the argument, I must be allowed to indulge myself.\(^\text{27}\)

For later utilitarians like James Mill, who heavily influenced Lord Macaulay and British policy in India, there was no “magnificent and presumptuous dream”—the British system simply was the height of civilization while the Indians were—there was no other way to put it—barbarians in need of enlightening and salvation.\(^\text{28}\) The Indian Penal Code, therefore, progressed by using English law as the basic framework; changes were made to address the significant environmental and cultural differences between England and India. Discounting the racist ideas at its kernel, this approach seems a most logical one for constructing a criminal law for the Raj. Indeed, the continued relevance of the Code is perhaps proof that it was, in some sense at least, a masterful work.

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\(^{27}\) Ibid, p. 363.

Customary Rights and the Political Economy of Agrarian Bengal

Conflict and Confusion

The history of Bengal, on one level, is a long history of various conquering forces vying for control over the land. Indeed, the discussion in the previous section is a chapter out of that history of the top-down organization of various regimes. On another level, however, there is the concurrent history of day-to-day village life. While the conquering Hindu rajas gave way to the Mughals who, in turn, gave way to the British and the institutional structures of the state changed accordingly, villagers had to find ways to live together and continually come to terms through it all. To be sure, state policies often had profound impacts on agrarian life—the Permanent Settlement of Bengal was a perfect example of this. There was, however, an aspect of village life in Bengal that had developed largely independently of the top-down policies of ruling regimes. British officials had struggled for years to come to terms with this customary order of rights and property.

An important voice that emerged during the debates surrounding Permanent Settlement was that of John Shore. An opponent of Hastings, Shore was nevertheless far from a crony of Philip Francis—the two men had quite opposed characters. Whereas Francis was dogmatic in his beliefs, shrewdly political, and adored the limelight, Shore, we are told, was a patient deliberator and a skilled and focused administrator who preferred to retreat to the countryside when back in England. It is to the conscientious

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29 As one historian puts it, “Over the centuries…agrarian history has also moved along in farming environments, outside the institutional structure of states, almost always connected in one way or another to state authority, but embedded basically in the everyday life of agricultural communities.” Ludden, David, Agrarian History of South Asia, Cambridge: Cambridge University Press, 1999.

Shore that we owe one of the most perceptive interpretations on the Bengali society of the time:

The most cursory observation shows the situation of things in this country to be singularly confused. The relationship of a zemindar to government, and of a ryt [peasant cultivator] to a zemindar, is neither that of a proprietor nor a vassal; but a compound of both. The former performs acts of authority unconnected with proprietary rights; the latter has rights without real property; and the property of the one and the rights of the other are, in a great measure, held at discretion. Such was the system which we found, and which we have been under the necessity of adopting. Much time will, I fear, elapse before we can reduce the compound relation of a zemindar to government, and of a ryt to a zemindar, to the simple principles of landlord and tenant.31

In this minute from 1789, Shore already makes valuable observations about customary rights and the problems they pose for the landlord-tenant framework of Permanent Settlement.

Indeed, the social order of the Bengali village presented two major problems for the British: (1) it varied significantly across localities32 and (2) there were, effectively, grades of proprietary rights amongst the various villagers, many of which did not quite fit into the categories of “landlord” or “tenant” and derived from customary status

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relations such as caste. Even the class of zamindars encompassed a varied bunch: they included men who had been territorial lords of varying power as well as more modest, “new money,” estate owners. At the bottom of the totem pole were the traveling peasant-cultivators, or rayats, who contracted with proprietors for relatively short periods of time and moved from estate to estate as opportunities arose. However, between the zamindars and the travelling rayats, there were also a large number of permanent resident cultivators who were in possession independently of any contract with the zamindar. These khud kasht cultivators often asserted a heritage to the founding of the villages; while they paid some nominal rent to the zamindar, they could not be evicted and the more eminent among them employed lower-order cultivators themselves. Additionally, there were also some villages, especially in north Bengal, which had been recently settled after clearing wasteland. In these newly settled lands, a great deal of status was sometimes conferred on the initial rayat settlers who, even when the lands were nominally part of a zamindari area, were the real proprietors of the soil.

Permanent Settlement, of course, only recognized the zamindar; its reticence in specifying the intricacies of the various relations grouped into “landlord-tenant” would prove to be disastrous. Since the Permanent Settlement had fixed the rent in perpetuity,

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33 The caste system is the infamous hierarchical Hindu class structure that is, to this day, a powerful force in many parts of India. Under this system, people are divided into castes, which are traditionally based on occupation. Many in the lower castes must consistently endure ritualized humiliation—for example, the lowest caste, the dalits, are considered untouchable.


36 Bose, Sugata, *Agrarian Bengal*, Cambridge: Cambridge University Press, 1986, pp. 11-12. These original settlers came to form a class of wealthy farmers known as jotedars. Notably, the reclamation process often involved significant use of labor provided by tribal groups who did not retain any significant right to the land after settlement.
every rupee over that mark that could be eked out of the various tenants represented pure profit for the zamindars. The tribute demands of the Mughals, who had preceded the British, had been lower, and under Mughal rule, in the absence of a fixed rate, the zamindars of the time had no guarantee that any additional wealth extracted from the peasantry would not simply be claimed by the state.\textsuperscript{37} Incentivized by the pressures of rent and the guarantees of profit now in place, and emboldened by the lack of legal protection for the rayats, zamindars continually increased rents on tenants throughout the first half of the nineteenth century. A new sort of “seigneurial sergeant”\textsuperscript{38} class emerged from amongst the villagers; these men, in exchange for favorable leases, colluded with the zamindars in applying pressure to the peasantry. The peasants, for their part, often rose up in violent revolt. Asserting customary rights to modest rents, common use of fisheries, and other aspects of pre-colonial life, peasants across Bengal took to arms.\textsuperscript{39} In short, within a century of British rule having been established, conflict and confusion threatened to destroy the order of the village community.

**Customary Rights in the Fish Order**

Fishing rights too were part of the customary order of the villages in pre-colonial times. They were, accordingly, also one area at issue in the conflict and confusion following British ascendancy. In considering the evolution of property rights surrounding fish in

\textsuperscript{37} Under Mughal rule much of the revenue apparatus was delegated to local emissaries of the state who were known as jagirs. The jagir right was often granted to court favorites who were then expected to carry out revenue administration in their own way. Baden-Powell, B.H., *Land Systems of Agrarian India* vol. 1, Oxford: Clarendon Press, 1892, pp. 189-190.

\textsuperscript{38} Ibid, p. 20

this period, the first property rights structure to be studied and understood is the customary one. Under the customary system, public use of the various rivers, streams, jheels, and beels⁴⁰ was the norm. Indeed, commons use often took place in the same water body as commercial fishery use. For example, in some villages in Mymensingh, in the easternmost part of the province, villagers were allowed to fish freely in all shallow beels twice a week. Similarly, in Dhaka, rod and line fishing by the public was accepted in all private jheels.⁴¹ Indeed, the local peasants cherished these rights of public use, as Guha informs us:

A good deal of the corporate life of the villages related…to the exploitation of the bils [beels], especially in the form of polo [a kind of fishing trap] fishing, an activity that involved all the peasants in a number of neighboring hamlets and combined productive labor with much entertainment…The polo [came to be] regarded as a badge of insurgency. It gave to the movement and its participants their respective folk names—‘Polo Bidroha’ and ‘Polowallahs’.⁴²

Customary fishing, it seems, was a constitutive element of the peasant identity—so much so that polos took on a symbolic power during rebellion.

When considering customary rights and the mixed-use fishing regime, it is tempting to exoticize the behavior and attribute it all to unique and impenetrable aspects of Bengali culture. It is tempting to say that, perhaps, there was something inherently communitarian in the character of Bengali villagers. These conclusions, however, are

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⁴⁰ Both jheels and beels are local terms for various kinds of lakes or ponds in the Gangetic floodplains. These water bodies often connect to the broader network of streams and rivers during the monsoons.


simply not borne out by the facts. For one, the customary order, apparently stable for generations, had already begun to break down within a century of British rule. In these circumstances, it is clear that any such inherent characteristics of the Bengalis, if they existed at all, were too weak and transient to demand attention. However, in the absence of any such inherent characteristics, it is all the more remarkable that customary patterns of use persisted for centuries, through droughts, floods, wars, and pestilence.43

I suggest in the following section that there was logic to the customary order. I point to certain central problems of economic organization faced by Bengalis in pre-colonial times and identify certain institutions that were well suited to solving these problems. Our analysis of the breakdown of customary order can then progress by pointing to changes in the important problems of economic organization and, consequently, the institutions that were best suited to address these. As I will show, systems of property rights and use are tied up with the demands of the broader political economy; that is to say, cultural and geographical aspects, prevalent modes of contracting, structures of exchange, and of property rights and use are all deeply intertwined.

The Logic of Customary Fishing Rights

Problems of Economic Organization in Pre-Colonial Agrarian Bengal

The Indian state of West Bengal and the nation of Bangladesh, which together form what used to be the British province of Bengal, both have population densities of over 1,000 inhabitants per square kilometer today.\(^4^4\) Two hundred years ago, however, labor was actually a scarce resource in the region; in fact, on the eve of Permanent Settlement a full one half to two thirds of land in Bengal remained uncultivated.\(^4^5\) The *zamindars* and other proprietors of the time nevertheless had rent demands from the Mughal authorities that had to be fulfilled. The demand for *rayat* tenant-cultivators, whose labor was necessary to meet these rents, was therefore high and competition amongst proprietors to attract these men would have been stiff. The relatively high land/labor ratio, additionally, characterized a country where power, governance, and exchange were highly decentralized.

In 1807, the East India Company, in its attempt to gain a better understanding of the Bengali society of the time, sent Francis Buchanan-Hamilton out to conduct what they called a “statistical survey” of the region. Buchanan-Hamilton had graduated with an M.D. from Edinburgh, but rather than follow in his father’s footsteps and become a village doctor in Scotland, he had devoted much of his life to cataloging the exotic flora

\(^{4^4}\) As a comparison, the U.S. state of Connecticut, the fourth most densely populated in the country, only has a population density of about 280/km\(^2\). Estimates are from the Indian Census (for West Bengal), the World Bank (for Bangladesh), and the U.S. Census (for Connecticut).

of the East.  

Over the next seven years, Buchanan-Hamilton compiled the voluminous *Geographical, Statistical, and Historical Description of the District, or Zila of Dinajpur, in the Province, or Soubah, of Bengal*—this exhaustive study of the flora, fauna, terrain, and ways of life of a Bengali district continues to be an invaluable window into the Bengal of the early nineteenth century. In that work, Buchanan-Hamilton shows a highly decentralized society with minimal monetization and underdeveloped markets. Local open-air markets, known as *hats*, only operated once or twice a week. Indeed, commerce had evidently not penetrated everyday life for the residents of Dinajpur:

> A *bazâr* ought to imply a place where things in common use are regularly sold, but in this district there is no such place of any consequence except in [the town of] Dinajpur, where there are two or three streets of shops, and at Ghoraghat, where there is one. At several villages there are two or three shops where provisions are sold.  

Additionally, even when markets did exist, Buchanan-Hamilton points to the varieties of currency in use, the lack of uniformity in weights and measure, and, as a result of these factors, the prevalence of fraud. Indeed, from these accounts, it seems that much training and experience would be required to navigate the Bengali markets of the time with any kind of authority. Trade and commerce, it seems, was more the realm of specialized merchants dealing in lucrative luxury items than an aspect of everyday life. Rather than shop for their daily needs, villagers lived through subsistence farming and very localized exchange and barter.

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48 Ibid, pp. 323-326.
Fish, even then, were in high demand. However, in the absence of developed sectors of trade, much of the catch consumed was simply caught by families or acquired from the small-scale enterprises run by fishermen and their wives or other small traders.\textsuperscript{49} Due to the lack of any preservation technology—Buchanan-Hamilton points to the scarcity of salt—and the lack of suitable transport, the fish trade, to the extent that it could be called a trade at all, was limited by locality.\textsuperscript{50} The profitability of commercial fisheries was, therefore, limited and riparian owners, recognizing this, were generally content to derive a rent from only those fishermen who regularly sought to use their waters for profit.\textsuperscript{51} In many smaller water bodies the only fishing done was generally by local villagers for private consumption, riparian owners in these cases were often content to allow commons usage.

Buchanan-Hamilton’s observations are, importantly, already from a period when the pace of monetization was increasing and markets were becoming more important for day-to-day life. One reason for this was increased cash-crop cultivation under the British. Whereas \textit{rayats} had previously derived their sustenance in kind directly from their labor, cultivators of indigo or opium were paid in currency and had to buy their daily needs.\textsuperscript{52} We can therefore imagine that the state of the markets and the extent of trade were even more primitive in the pre-colonial time when mixed-use fishery regimes originated. The high land to labor ratio, the lack of monetization, and the primitive state of trade and markets were all elements of the Bengali economy of the time that were relevant to the sustenance and security of customary fishing rights.

\begin{itemize}
\item \textsuperscript{49} Ibid, pp. 141-142.
\item \textsuperscript{50} Ibid, p. 137.
\item \textsuperscript{51} Ibid, pp. 141-142.
\item \textsuperscript{52} On indigo cultivation in Bengal, see Bhattacharya, Subbas, “Indigo Planters, Ram Mohan Roy and the 1833 Charter Act,” \textit{Social Scientist}, 4.3, Oct. 1975, pp. 56-65.
\end{itemize}
Origins of the Mixed-Use Fishing Regime in Bengal

The force with which customary fishing rights were asserted by peasants suggests that commons use of fisheries must have been the norm across the various village and estate structures of pre-colonial Bengal. During the conflict and rebellion of the mid-eighteenth century, the assertion of customary fishing rights was not limited to one area or one type of village; rather, it was widespread throughout the province. Therefore, in deciphering the logic of customary fishing, we must look to how it fits into the diverse village structures of the time. To that end, I first turn to the case of the newly settled villages in the northern jungles. The logic of customary fishing is most transparent in these cases. Additionally, it may be useful to think of these settlements as a kind of paradigm for the early stages of village development. In that sense, they provide a window, however imperfect, into what life in the more established villages might have been like at the time of initial settlement hundreds of years ago.

In the newly settled villages, off in the remote jungles of north Bengal, shortages of labor were particularly acute. The jotedars, who were the main group of initial settlers, and any workhands and cultivators working under them would not have been able to sustain much division of labor. Markets were non-existent and subsistence, while engaging in the gradual clearing and settling of land, took up much time and effort. In this environment, there would have been no scope for profitable fisheries; in fact, in the absence of specialized fishermen and networks of exchange, if any fish were to be eaten

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53 The High Court cases to be considered in a later chapter highlight the conflicts over fishery use and the frequency with which peasants made assertions of customary right.
54 Baden-Powell, for example, points to the importance of first-clearer rights even in villages that had been established for generations—this suggests that perhaps some of the more established villages had, indeed, been settled in a somewhat similar way to the new settlements in north Bengal. Baden-Powell, B.H., Land Systems of Agrarian India vol. 1, Oxford: Clarendon Press, 1892, p. 207.
at all, the catch would have had to be for direct consumption. Given that fish is such a culturally significant food item, *jotedars* and their subordinates would have fished the local rivers, *beels*, and *jheels* for their sustenance. In the absence of markets and specialized fishermen labor, the local water bodies were used as commons.

Now, we can imagine a historical narrative wherein these primitive settlements gradually develop into villages with specialized labor, exchange, property rules, and power structures. These settlements, then, begin to gradually resemble the *zamindari* lands of west and east Bengal. A power structure emerges wherein the descendants of the original settlers become *zamindars* or privileged *khud kasht* cultivators. As the process is ongoing, *zamindari* settlements, which are further removed from the conditions of original settlement, coexist with newly settled *jotedari* areas. At some point in this progression, *zamindars* and *jotedars*, often through tenants or members of their staff, begin to operate small fisheries in their riparian landholdings. Use of these same water bodies as commons nevertheless continues, and what we have, therefore, is a mixed use fishing regime. The question of why the commons use continued alongside fishery use is a central question that I answer in the following sections.

The matter of right is at issue here so to assert that *zamindars* had the right to fully enclose these water bodies would perhaps be to commit the fallacy of begging the question. Who has the right to what becomes a matter of intense conflict and contention during the nineteenth century in Bengal. In the nineteenth century both peasants and *zamindars* began to assert contradictory rights over the same water bodies with similarly fervent conviction; indeed, much violence and death resulted from the ensuing conflict—

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55 As Bose points out, by the nineteenth century most of the newly settled *jotedari* areas were in north Bengal. Bose, Sugata, *Agrarian Bengal*, Cambridge: Cambridge University Press, 1986, pp. 3-34.
people on both sides cared, deeply and personally, about this issue. To assume that zamindars had a final and overwhelming right to enclosure would therefore be to dismiss the peasants’ claims of customary rights to public use entirely. A way to frame the project of the following sections is as an archaeology of these contradictory claims of rights. This kind of analysis can ultimately help us decide some aspects concerning rights in inland waterways in Bengal. Specifically, it can reveal the roles of the competing sources of assertions of rights, be they colonial English law, or Hindu law, privately agreed upon contractual agreements between individuals and groups, or broad appeals to the general welfare. For now I put the issue of justice and right aside, to be returned to at a later point.

Whether or not they had the right, however, zamindars certainly did have the power to enclose their lands. Eminent zamindars were not above employing men to rough up delinquent rayats or press their rent demands—this would become clear during the “rent-offensive” of the early 1800s. In addition to employing muscle, major zamindars also had significant influence among the formal judicial and legislative structures during both colonial and pre-colonial times. Despite all of these sources of coercive power, however, zamindars and other classes of real proprietors across the province seemingly did not attempt to enclose their riparian holdings for generations. I now turn to the question of how this mixed-use fishing regime came to be so stable for

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56 Bose describes the zamindari system of the time as the “lathi raj”—literally, rule by the stick. Even in pre-colonial times, when rent demands were lower, zamindars often employed men to protect their lands from bands of marauding dacoits and thugs. Bose, Sugata, Peasant Labour and Colonial Capital: Rural Bengal Since 1770, vol. 3, Cambridge: Cambridge University Press, 1993, p. 118.

57 Many of the biggest zamindars during Mughal times were local rajas who retained full power over the administration of justice in their lands. The enduring influence of the zamindars in legislative matters would become clear in the passage of the Private Fisheries Act of 1889, which will be studied in a later chapter. Ibid, p. 183.
so long: given the coercive powers at the disposal of zamindars, why, for generations, were riparian lands not enclosed even in established zamindari estates where there were operational fisheries?

Stability of Customary Fishing in Zamindari Lands

The high land-to-labor ratio and the absence of developed markets are again central to the story here. During the pre-Permanent Settlement time, zamindars were eager to attract cultivators to their lands. There was thus an impetus to leave the rayats relatively unmolested. Rents were kept at reasonable rates and commons use of water bodies was tolerated to attract and keep more tenant cultivators. Due to the scarcity of labor and the necessity of meeting the tributary demands of the state, there was an incentive for zamindars to provide for commons usage as a means of attracting cultivators. The language of incentives is, however, somewhat misleading insofar as it implies a meaningful choice between alternatives. Indeed, in the environment of scarce labor, there may not have been a meaningful choice available to the zamindar; to fully enclosure his lands with force would be to condemn his fields to lay fallow.

While there was much to be lost in enclosing water bodies, there was also little to be gained. In the absence of market infrastructure, the profitability of fisheries was limited. Given the difficulties in trade and transportation, a fishery operator had no reason to exhaustively cultivate his beel—if he did, much of the catch would simply go to waste because there was no one to sell it. Buchanan-Hamilton notes that in a typical case

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59 Note also that, by Guha, fishing was clearly a cherished activity for the peasants of Bengal.
a tenant farmer only demanded half of the catch from each fisherman he employed. This suggests, albeit anecdotally, that marketing large quantities of fish was a significant challenge even by the early 1800s. Given the limited profitability of fisheries, proprietors could, for generations, tolerate commons use alongside fishery operation. Not only did the commons use attract the highly valued rayat labor, it apparently did so at negligible cost. Given the bounds placed on fishery operations by the primitive state of market infrastructure, bona fide commons use did not interfere with for-profit use.

It is therefore not difficult to see that the zamindar had good reason to allow commons use of the water bodies within his estate. But pointing to the incentives that zamindars had for establishing commons use is not enough to illustrate how the mixed-use fishing regime came to be such a stable bargain between zamindar and rayat. Importantly, there was always the possibility that the rayat, who was only temporarily contracting with a given zamindar, would abuse his privileges. There was a real risk, undoubtedly in some localities more than others, that commons use would lead to rampant overfishing. The problem, in other words, is one of contract enforcement; in the case of customary fishing, the contract is an implicit one—a kind of understanding between rayat and zamindar as to what constitutes proper use. Given this talk of implicit understandings, the kind of contract that will be of particular interest to us is the relational contract, where the preservation of a consensual relationship, above and beyond the execution of any one given transaction, is valued. Such contracts are often characterized by implicit understandings rather than explicitly and separately negotiated transactions.

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60 This farmer had, in turn, leased fishing rights from a local zamindar. Buchanan-Hamilton, Francis, A Geographical, Statistical, and Historical Description of the District, or Zila of Dinajpur, in the Province, or Soubah, of Bengal, Calcutta: The Baptist Mission Press, 1833, p. 141, he gives another similar example on p. 142.
To return to the problem of overfishing, it is hard to see how fish populations could sustain themselves if every peasant in a village descended on the few local jbeels every weekend and arranged for a feast. Indeed, customary fishing, we are told, typically occurred with much greater frequency in the monsoon months whereas commercial fisheries operated in the dry months when the fish were confined to smaller areas and were easier to catch.61 Given his love for fish, time on his hands, and the open jheel, however, there is no obvious reason why any given rayat would not fish consistently year-round in the absence of external governance.62 In mixed-use cases, zamindars would have wanted assurance that customary fishing would not interfere with their profitable fishery operation.

While there is no real data on the politics of Bengali fisheries in pre-colonial times, the simple fact that mixed-use fishing was sustained for so long suggests that gross opportunism on the part of the rayats was exceedingly rare. Again, there is a temptation here to say that there was something arcane in the Bengali culture that prevented this kind of opportunism. While culture was certainly an important aspect of things, it was part of—and did not preclude—the broader logic of mixed-use fishing. The saga of revolt and upheaval throughout the later nineteenth century is, again, proof that any inherent communitarianism of the Bengali village was largely contingent on aspects of political economy. I now turn to the question of how the problem of opportunism was solved and, consequently, of how behavior, on both sides of the bargain, was brought in line with stable mixed-use of local water bodies. That is to say, I continue the project of

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62 This kind of behavior, in aggregate, is the famous tragedy of the commons situation in which the individual exclusively receives benefits while damages are shared.
exposing the logic of customary fishing and detailing aspects of the political economy that both necessitated it and made it possible.

**Asymmetric Information and the Problem of Opportunism**

Suppose that there are two types of *rayats*, those that are opportunistic and those that are honest.\(^{63}\) Contracting with too many opportunistic tenants for too long can be disastrous for the *zamindar*; these tenants tend to shirk on work and rent payment, they also tend to fish during the dry season, and, in general, show little regard for the value of fisheries. To make matters worse, they pick up and move away at any sign of trouble from the *zamindar*, leaving their debts unpaid. Indeed, considering he is unlikely to be apprehended, there may be incentive for a *rayat* to behave in this way. He moves from estate to estate, living comfortably off the land and leaving before paying his full rent—in this way, he enjoys all of the benefits of tenancy without incurring any costs. Constantly patrolling his estate for this kind of behavior is prohibitively costly for the *zamindar*. If the *zamindar* only contracted with opportunists, his hereditary lands would soon be turned to waste. On the other hand, the *zamindar* must contract with *rayats* to cultivate his lands, which are, after all, the source of his wealth and the only means he has of paying the required rents to the state. The *zamindar* knows that these two types exist. However, whether any given *rayat* is honest or opportunistic is privately held information that the *zamindar* does not have access to. Furthermore, it is clearly in the

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\(^{63}\) Perhaps the “honorable” type does not engage in grossly opportunistic behavior because it impacts his self-regard in such a negative way as to deter it. Even this differentiation of types can be seen as based on the preferences of the consumers (in this case the *rayats*), which, in economics, is a priori determined.
interest of the opportunistic rayat to lie about his opportunism, so the zamindar cannot simply ask him.

Given all of this, the zamindar needs a mechanism that, while not necessarily perfect, is reasonably effective at revealing the types of rayats. Once the type is revealed, he can act in a way that reliably minimizes damages from opportunistic behavior. Notably, without a mechanism for revealing type, there may also be a risk that the “honest” type is driven out of the labor market altogether. In one potential case, the zamindar, if he accepts his predicament, may increase his rent demands on the cultivators to offset the expected losses from opportunists. The opportunist, who may not pay full rent at all and who is likely to reap extra rewards from overfishing, can likely accept the higher rents; these rents, however, may prove too high for the truly honest rayat. In Akerlof’s famous formulation, the market, given asymmetric information, ends up picking the lemons—the bad eggs—over the creampuffs.

The problem we are dealing with here is, in the language of game theory, a principal-agent problem with asymmetric information. More specifically, the problem for the zamindar, who is the principal in this case, is a kind of mechanism design problem. The zamindar wants to condition his behavior on the “type” of rayat, the agent. Specifically, he wants to evict opportunists as soon as they are identified and he wants to keep the trustworthy rayats on his estate for as long as he can, and will tolerate their use of commons because he knows that they will not overuse it. However, since he cannot simply ask the rayat for his type, nor afford to constantly police his estate, the zamindar

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must design a contract that facilitates the *rayat* revealing his type.⁶⁵ Here, the framework of mechanism design is an abstraction to facilitate analysis. Given the decentralized polity of Bengal, it is highly doubtful that the customary system was, in fact, a planned outcome. Rather, it is likely to have been evolved over time—the result of implicit negotiation between *zamindar* and *rayat*.

The framework of mechanism design, however, makes transparent the problem that likely faced *zamindar* and honest *rayat* alike since time immemorial. Namely, how to overcome the possibility of purely hedonistic behavior, given asymmetric information, and reach a state of affairs from where stable, consensual exchanges can be made. In other words, mechanism design gives us, in a very succinct way, the problem for which we can then identify an institutional solution. This “contract” or “mechanism,” whatever it may be in specific, is central to the political economy of pre-colonial Bengal because it solves the potentially crippling problem of opportunistic behavior by *rayats* and creates trust between *zamindars* and *rayats* and, more broadly, within the village. To put it yet another way, we are looking for an enforcement mechanism for both explicit contractual agreements such as rent and implicit ones such as those detailing fishery use.

**Gift Giving and Relational Exchange**

While some aspects of Buchanan-Hamilton’s studies—especially his numerical data—have been called into question by modern scholars,⁶⁶ what interests us now is an uncontroversial and, to him, seemingly innocuous observation. While surveying the

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fisheries of the Atrai River at the town of Patnitala in what is today northern Bangladesh, Buchanan-Hamilton notes, “each fisherman pays six annas [where one anna is a sixteenth of a rupee] a year; but then except from the chief men, 10 annas more are said to be exacted as presents, making the whole duty one rupee a head, and they may fish in whatever manner they please.” Buchanan-Hamilton is content to count the sum paid as gifts, which is greater than the rent, as comparable enough to rent that the two values can be summed to arrive at the number for the whole duty. But then, an obvious question arises: why call the one “gifts” and the other “rents”? I now suggest that this distinction between gifts and rents points us towards the mode of contracting that solved the zamindar’s problem of mechanism design and facilitated customary fishing and, more generally, contract enforcement.

 Marcell Mauss, the famous anthropologist and theorist of gifts, writes the following about the primordial importance of gifting:

> For a long period of time and in a considerable number of societies, men confront each other in a curious frame of mind, involving an exaggerated fear and hostility and an equally exaggerated generosity…There is no middle ground: complete trust or complete mistrust…it is in conditions of this kind that men put aside their self concern and learned to engage in giving and returning. They had no choice. Two groups of men that meet can only withdraw—or in case of mistrust or defiance, battle—or else come to terms.

Gift giving is, by Mauss, community enhancing; it represents a commitment between the contractual parties to continue to “come to terms.” Once a gift is given, there is an

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implicit obligation put on the receiver to reciprocate in some way at some time in the future.\textsuperscript{69} The people of Patnitala were, of course, not in some kind of Hobbesian state of nature, but Mauss’s account of gift giving remains relevant to the situation. Specifically, given the expectation of reciprocity and contextualization of transactions within a broader relationship, gift giving seems like a kind of relational contract.

A relational contract has more than the consummation of any one transaction as its object. Rather, as the name suggests, a primary aim in a relational contract is the preservation of a consensual relationship—that is, the cultivation of trust and the securing of future transactions between those who contract.\textsuperscript{70} Gifting, given the Maussian expectation of reciprocity, can be seen as a relational contract between two parties, perhaps a fisherman and a proprietor, who agree to exchange gifts. The gift giving may be highly discretionary; the participants in the contract can confer goods in kind, cash, rights of use, or even intangibles such as reputation on each other. The important thing is the commitment to reciprocate. As Mauss informs us, “The gift not yet repaid debases the man who accepted it.”\textsuperscript{71} The initial gift can be refused, and indeed this constitutes a rejection of the relational contract.

As Mauss’s primordial example illustrates, this kind of agreement may initially stem from a form of self-interest—the realization that there is more to be gained by


coming together and exchanging than by fighting or moving apart. It is, at first at least, all business. Exchanges are tentative and unpredictable and expectations are low. As the relational contract develops, however, exchanges begin to be contextualized in an ever-deeper and more stable personal relationship. Expectations are formed and hardened and, as Srinivas puts it, over generations, “hereditary rights and duties [acquire] ethical overtones.”

So far I have only presented one example of gifting in the Bengali fish-order—in that example, moreover, we do not have enough information to make sense of the intricacies of the gift exchanges taking place. There is reason to believe, however, that relational contracting was prevalent throughout India in pre-colonial times. Srinivas, for example, notes, “In the context of a non-monetized or minimally monetized economy, and very little spatial mobility, relationships between households tended to be enduring.” I now turn to the question of how relational contracting solved the mechanism design problem faced by the zamindar in the previous section. This, in turn, gets to the logic of why relational contracts were predominant in the Indian countryside.

Relational Contracting as a Solution to the Asymmetric Information Problem

The zamindar has a choice when he contracts with any new rayat. He can, for one, model the contract to resemble a discrete transaction. As MacNeil informs us:

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\text{A truly discrete exchange transaction would be entirely separate not only from all other present relations but from all past and future relations as well. In short, it could occur, if at all, only between total strangers, brought together by...}
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73 Ibid, p. 43. Note, of course, that in the case of the travelling rayats of Bengal, spatial mobility was not limited.
chance (not by any common soci-

al structure, since that link constitutes at least

the rudiments of a relation outside the transaction). 74

In our case, a discrete contract would perhaps only specify a rate of rent and length of
tenancy. The zamindar and rayat would agree upon these terms, and the rayat would settle
somewhere in the estate, which might encompass thousands of acres, not to be seen by
the zamindar for months. This kind of arrangement, however, does not help the zamindar
distinguish between the honest and dishonest rayats. The opportunistic rayat can overuse
the commons available to him for a lengthy portion of time, shirk on his rents when the
time comes, and leave when the zamindar finally comes to find out about it, never to be
seen or heard from again. The contract enforcement problem is as acute as ever and
pure hedonism continues to dictate opportunistic behavior on the part of the rayat
whenever possible.

Another mode of contracting available to the zamindar is the relational contract.
Under this kind of framing, the zamindar may, in addition to specifying rent and tenancy
length, ask for periodic gift exchange. He may, for example, offer an initial gift to an
incoming rayat as a gesture of goodwill, with the expectation that the gift is repaid at a
later time and that the gift exchanges continue. If the gift is not repaid, the zamindar,
seeing this as a sign of an unscrupulous character, may immediately evict the rayat. But if
there is a reciprocating gift, there is an opportunity for zamindar and rayat to create a
contractual relation of reciprocal gifting that could solve the informational asymmetry
problem in two main ways. First, in calling for periodic exchanges throughout the term
of tenancy, the contract produces repeated interactions between the zamindar and rayat.

74 MacNeil, Ian R., “Contracts: Adjustment of Long-Term Economic Relations Under
Classical, Neoclassical, and Relational Contract Law,” Northwestern University Law Review,
72.6, Jan.-Feb. 1978, p. 856.
Through these repeated relational transactions, the zamindar comes to personally know the rayat he has contracted with; he comes to better understand the rayat’s preferences and can perhaps form a judgment of his character and hint at his “type.” Furthermore, the behavior of the rayat, in a more specific sense, within the context of relational gift exchange can help reveal his type. That is to say, the kinds of gifts he gives, the frequency with which he gifts, the kinds of gifts he accepts—these are all behaviors that may supervene on whether he is honorable or opportunistic.

For example, it makes sense for a rational dishonest rayat to minimize gift giving because gift giving only cuts into the extra profits he wants to extract from his tenancy. On the other hand, an honest rayat, who values trust and wants to avoid the adverse selection problem, will likely be more generous in gifting. The association between gift giving behavior and the “type” of rayat may thus be based on the divergent demands of rationality as defined by the differing preferences of honest and opportunistic rayats.

Over time these links may be crystallized into a broader reputational system within which certain behaviors are consistently associated with certain character types. Moreover, the reputational system may become a powerful social construct in itself; a rayat, for example, may engage in gift exchange and refrain from opportunistic behavior purely as a means of enhancing his reputation as an end in itself. And he can do this in complete ignorance of the original reason for relational gift giving and with no conception of what the asymmetric information problem is. So, relational gift exchange, once reputational costs and benefits become established over time, turns out to be not just a way to identify “types” but a way to actually incentivize desirable “types.”

To be sure, this relational contract is not a perfect mechanism for solving the problem of opportunism—it does not, after all, necessarily or directly reveal type.
However, its superiority over discrete contracts in solving problems related to asymmetric information is easy to see. The mixed-use fishing regime, as we have seen, was a stable bargain between zamindar and rayat under which each accommodated the other’s use of the same water bodies for fishing. While rules of use were never explicitly laid out, there were implicit understandings—the fisheries operated in the dry season while the common rayats fished more liberally in the monsoons etc.—between the two groups that facilitated overlapping use. Given relational contracting, we can begin to see how mixed-use fishing came to be a stable outcome. If we think of mixed-use fishing as a kind of implicit contract with significant discretionary aspects, relational contracting of the sort represented by gift exchange helps root out adverse use by the peasantry.

Specifically, this kind of contract serves the interests of zamindars and honest rayats while it works against dishonest rayats. The zamindar can identify the cultivators who will deal with him fairly and the honest rayats will avoid the problem of adverse selection from increased rents. The dishonest rayat, however, will likely be found out and evicted before he can derive any significant benefits; his strategy will therefore be rendered ineffective. Given that the contract is in the interest of both honest rayats and zamindars, no third party enforcement is required and the contract, we say, is self-enforcing. Similarly, given that this mode of contracting solves the problem of asymmetric information and adverse use, and given that the zamindar has no incentive to expand his commercial fisheries, the customary fishing order as a whole is also made self-enforcing.
Interestingly, within the zamindari system, there seems to have indeed been certain tenancy contracts that, as kinds of tenancies at will, were entirely relational. The existence of these modes of contracting can perhaps be explained by the analysis being done here. Under a tenancy at will, there is no explicit agreement between zamindar and rayat as to the amount of rent to be paid or the duration of the tenancy. Each is instead free to nullify the contract at any given time. Why would an estate owner ever agree to such a mode of contracting? One possible answer is provided by the analysis done here. This kind of relational contract facilitated the cultivation of lasting trust between the parties, or to put it in the language of the principal-agent game, the identification of “type.” As such, it tended to solve the problem of asymmetric information that, given scarce labor and primitive markets, posed a grave threat to the economic order.

The Logic of Customary Fishing Rights

The logic of customary fishing as explained in the preceding sections is, therefore, tied up in the demands of the broader political economy; that is to say, cultural and geographical aspects, prevalent modes of contracting, structures of exchange, and of property rights and use are all deeply intertwined. The scarcity and high demand for rayat labor, along with limited possibility of profitable fishery operation, meant that proprietors did not forcefully enclose water bodies even as small settlements grew into large estates and villages. The institution of relational contracting, in turn, found a special significance as a tool for overcoming informational asymmetries, minimizing destructive

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75 A High Court opinion notes, “The pabi-basht [a class of cultivator] was...an immigrant. There is reason to think that originally he was a tenant-at-will.” The Midnapore Zemindari Company vs. Hrishikesh Ghosh and Another, 24 April 1914, 25 Ind. Cas. 562, http://indiankanoon.org/doc/1812591.
use by peasants, and imposing stability on the customary fishing regime. The institutional outcomes in customary fishing are, in this sense, functional responses to the problems of economic organization faced by Bengalis in pre-colonial times.

In applying the analytic method of a principal-agent game, I have had to overlook some of the complexity and variation of agrarian life in pre-colonial Bengal. While I have proceeded from something of a caricature of a zamindar contracting with a rayat, the point is that the essential problems faced in that emblematic case were relevant to a broad range of real-world situations in Bengal at the time. Scarcity of labor and undeveloped markets, for one, were common characteristics throughout the country. Similarly, problems of asymmetric information and possibilities of adverse use were real whether it was a zamindar contracting with a peasant, or a farmer contracting with a fisherman, or peasants contracting amongst themselves. The institutional solution that I have proposed, the relational contract, is similarly relevant in a broad range of real-world contexts where these problems are faced.

The value of the analytical framework—perhaps well described as principal-agent mechanism design by way of Akerlof—is that it presents the transacting problem succinctly, helps identify key players, and points us towards an institutional solution in the form of a contract. The model must ultimately answer to the data, which in this case it seems to do rather well. Indeed, my analysis has progressed by way of questions raised by the data: Why did mixed-use fishing come about? How did mixed-use fishing persist? Why was there a gift economy amongst the Atrai fishermen? The model, as is common in economics, is a way of connecting the dots.
Conclusion

The Shadow of Violent Upheaval

We began this chapter motivated to find our feet in the political economy of Bengal in the nineteenth century. Indeed, as this is the first chapter of a broader saga of the evolution of property rights surrounding fish, we began by detailing aspects of the early evolution of the British Raj as well as the customary order that characterized village life in Bengal. Customary fishing was, of course, of special interest and we began an institutional analysis of it, pointing to aspects of geography, demography, structures of exchange, and modes of contracting that brought on customary, mixed-use fishing regimes. The explication of customary rights was, for us, the first step in detailing the evolution of fishing rights in the region. All of this fit into the broadly Geertzian project of “finding our feet”—of understanding key elements of political economy and life on the ground, especially as they related to fisheries, in nineteenth century Bengal.

Looming over the entirety of this chapter, however, was the shadow of violent upheaval. I have repeatedly alluded to the famine, mutiny, and peasant revolt that would periodically convulse the Bengali countryside throughout the nineteenth century. Our analysis so far, however, has reached a rather happy conclusion. We identified certain problems of economic organization in pre-colonial and early-colonial Bengal; based on these problems and their institutional solutions, we identified the ways in which the customary fishing regime was made a stable and consensual outcome. In other words, the system, as I have described it, worked. To be sure Bengalis, for the most part, did not have any significant wealth. There were, of course, none of the “Walkmans, and
Reeboks...mink coats and seven-million-dollar-a-year baseball players”⁷⁶ that are familiar to us—there were, indeed, hardly any markets at all. People, however, generally did not starve and village life was, by all accounts, mostly stable. Why did this order, which had been stable for centuries, come apart so suddenly and so violently? This is the question I now turn to. As always, our analysis will center on the evolution of the fish-order.

Disequilibrium
Supply, Demand, and the Dissolution of Customary Order

Introduction

The Rayats of Pabna

In 1873, the rayats of Pabna, a town in what is today northern Bangladesh, rose up in violent revolt against the local zamindars. The leaders of that revolt issued the following circular in an attempt to mobilize broader support amongst the rayats:

So and so Projas [tenant cultivators]! As soon as you see this circular, hasten over to the side of the insurgent party. If you fail to come within this day, rest assured that we go to fish in the beel, close by your village. We have already fished in the beels of so and so villages. Know this order is peremptory.1

“Fishing in the beels” was here a euphemism for the intimidation and destruction that the Pabna rayats were engaging in. The insurgent peasants rioted, raided zamindari estates and police stations, and intimidated and abused zamindars and their cohorts.2 Their grievances included exorbitant rents (rack-renting), arbitrary and unpredictable imposition of taxes by the zamindars, physical coercion and intimidation, and the tendency of landlords to alter occupancy rights at will.3

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2 Ibid, p. 158.
Customary rights, specifically those concerning fishing, were also becoming a source of tension in the 1870s and 1880s.\(^4\) In a district like Pabna, with its nine *beels* encompassing a total area of 215 square miles,\(^5\) the imagery of communal fishing was perhaps an especially powerful one for rebel mobilization.\(^6\) But large parts of Bengal were, like Pabna, wetlands with rivers and streams feeding *beels* and *jheels*, and communal fishing was important to the peasantry throughout the province. According to Guha, peasant rebels throughout Bengal would often be brought together in the dead of night by the blowing of a horn—the same horn used, in peacetime, to inaugurate festive communal fishing.\(^7\) The blowing of this horn became such a source of dread that ordinances were passed in certain districts under the Indian Penal Code “forbidding the *rayats* to sound horns at night with a view to causing terror.”\(^8\)

The case of Pabna is particularly interesting because the uprising was fairly well organized. The Agrarian League of Pabna, led by the wealthier amongst the *rayats*, had been formed to create a reserve fund to pay for civil litigation against landlords.\(^9\) The League, however, became the organizing force behind the uprising; it mobilized the lower classes and orchestrated planned and purposive action against landlord interests. By the time of the Pabna Uprising, the customary order described in the last chapter was

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\(^4\) As evidenced by the stream of litigation on the matter that came before the Calcutta High Court; see, for example, The Meherpore Case of 1887 in Cranenburgh, D.E., *A Handbook of Criminal Cases Containing a Verbatim Reprint of All Criminal Cases Reported in Vols. I to XVI, Calcutta Series I.L.R., With a Complete Digest*, Calcutta: D.E. Cranenburgh, 1890, p. 819.


\(^6\) Here we may also recall the symbolic significance of the *polo* traps mentioned in ibid, p. 127.

\(^7\) Ibid, p. 128.

\(^8\) Quoted in ibid, p. 128.

in disarray. Relationships between rayats and zamindars were falling apart and violence and coercive force, rather than bona fide consensual contracting, increasingly dictated the terms of transactions. Answering the question of why this was happening is the project of this chapter.

To complicate matters, there seemed to be an intractable confusion regarding rights. In the matter of fishery use, for example, the zamindars believed they had every right to enclose their riparian holdings. Indeed, they believed that they had always had this right—the fact that beels had remained open for common use was a matter of zamindari benevolence, mixed perhaps with the real necessity to lure rayat labor. The rayats, however, had a very different view of things. Commons use of waterways for fishing had been the norm since time immemorial and communal fishing was a source of food and leisure. But, perhaps most importantly, it was also an opportunity for the peasant community to congregate and engage in cooperative labor. 10 As such, customary fishing was an opportunity for the peasants to bond with one another and establish community. As we have seen, customary fishing was seasonally determined; fisheries operated in the dry season while rayats fished more liberally in the monsoon. Mass communal fishing by the rayats in the monsoon months was, however, more than just a practice taken up to avoid conflict with fishery operations. It was, in its own right, an essential part of the seasonal festivals; for example, it was the traditional way for peasants to celebrate the Bengali New Year. 11 Indeed, fish were essential to the specific religious

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11 This is the kind of customary fishing that was at issue in the aforementioned Meherpore case. An involved analysis of these cases is the project of the next chapter.
rituals that accompanied the Bengali New Year for the peasants. To forcefully enclose riparian lands was, therefore, not just to dispossess the *rayats* of physical property, it was to dispossess them of culturally significant customs.

This chapter, broadly, is about how a disequilibrium in supply and demand in Bengali markets led to more than a smooth and momentary adjustment in prices and quantities. Questions of right and justice, which have so far been peripheral to this analysis, become more central later in this chapter. Matters of economic organization, in this case and others, are deeply bound up with both socio-political aspects as well as issues of fairness and justice; because of this, what starts as a simple adjustment of supply and demand snowballs into all-encompassing societal upheaval. In order to explicate the conflicts that periodically shook the Bengali countryside throughout the nineteenth century, it will be necessary to examine how economics, politics, and norms of fairness all intersected in nineteenth century Bengal. We will do this by building on the analysis of the previous chapter. The main argument presented in this chapter is, as far as I can tell, an original one. Namely, the increasing marginalization of the Bengali peasant class in the 1800s was not primarily a result of increasing population or shifts in the relative scarcity of labor to land. Rather, this marginalization stemmed directly from famine and the policies of the colonial government. I use game theory to illustrate the

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13 Indeed, I went into this analysis anticipating that changing demographic trends would be a major part of the story. However, this account is decisively contradicted by the deadliness of the famine of 1770, which I describe later in this chapter. If anything, that famine led to a drastic change in the land-labor ratio in favor of labor, which *ceteris paribus* we would expect to improve the bargaining position of the *rayats*. But what one observes is a decline in this bargaining position, so some other mechanism must be at work. This other mechanism, which I describe in this chapter, stems from the destructive effects of famine.
mechanism by which this could have happened and to illuminate the causes behind outbreaks of revolt and conflict. First, in order to frame these broader arguments, I turn to some important changes in the central problems of economic organization for Bengalis that emerged in the late eighteenth and nineteenth centuries.

**Supply and Demand**

**Walras on the Ganges**

The law of supply and demand states that market systems tend to equilibrate. That is, if there is excess demand or supply, prices will change until quantity demanded equals quantity supplied at the given price. This conclusion owes a lot to the nineteenth century French economist Leon Walras. Friedrich Hayek, expanding on the insights of men like Walras and Alfred Marshall, famously pointed out that prices serve an important informational function.\(^{14}\) Specifically, prices signal the relative demand and supply of a given good and thus allow buyers and sellers to mobilize in a way that promotes allocative efficiency. Businesses make planning decisions according to prices of inputs and outputs, entrepreneurs, working on the basis of price, set up shop in the areas where there is most opportunity for profit, and labor moves to trades with relatively high pay—in all of these ways, prices coordinate the organization and reorganization of economic activity. As Walras would have us know, the system of interrelated markets constantly adjusts towards a general equilibrium. It is not immediately clear, however, how Hayek’s price-based information economy applies to pre-colonial Bengal. How would the price system operate in the absence of markets and monetization, and in a political economy

characterized by relational contracting? This is an important question to be asked before embarking on an analysis of supply and demand in nineteenth century Bengal.

First, it is important to remember that markets did exist in nineteenth century Bengal, and the price system, where it existed, functioned roughly as Hayek describes it—it coordinated behavior by transmitting information on the availability of goods and the needs and wants of the people. Buchanan-Hamilton describes market exchange of even such essentials as fish and grain. Indeed, rice, a staple of the Bengali diet, constituted most of the commerce in the district of Dinajpur. But the scope of the price system was limited. Most trade was conducted in very localized circuits—most of the commerce in Dinajpur, for example, was based on the produce and manufactures of that district. Additionally, this trade was extensively supplemented by subsistence agriculture and relational exchanges, like the gift exchanges of the previous chapter, within very localized communities. Market exchange, while important, was not central to the lives of many rural Bengalis. Indeed, a significant expansion in market exchange occurred through the nineteenth century. To properly appreciate this expansion, however, we must first recall that it did not spring from a purely subsistence economy.

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16 Ibid.
Prices, Markets, and Relational Contracting in Pre-Colonial Bengal

The question of how relational contracting fits in with the price system is an especially interesting one. Buchanan-Hamilton again provides us with a valuable data point in early nineteenth century Bengal:

The *paikars* [small middlemen merchants] take a small quantity of goods at a time, and go to all the neighboring markets, where they make their sales, and purchase the articles, which they know the great dealers will take off their hands. It is through them chiefly that the great dealers make advances for cloth or grain, because the *paikars* are acquainted with the characters of the individuals, for whom they become security.\(^{17}\)

So here, just as in our analysis of customary fishing, relational contracts seem to solve a transacting problem. Credit—the giving of advances—was essential to the functioning of these markets. Without advances, smaller retailers would not be able to conduct their businesses—they simply would not have had the means to buy up sufficient stock with cash upfront. But the giving of an advance in the absence of effective third party contract enforcement is clearly very risky for the big merchant. An opportunistic small merchant has every incentive to take the advance and run. A relational contract between the *paikar* and the small merchant solves this problem and makes the giving of an advance a self-enforcing contract. While it is unclear exactly how the *paikars* became “security” for the loans, the implication is that the *paikars* took on most of the risk of the loan. The most obvious way in which this could be accomplished is if the *paikars* had to pay back the advance to the big merchant in the case of a default by the small merchant. The logic here follows the analysis of the previous chapter. Namely, the relational contract is a means of solving the problem of informational asymmetry. The

\(^{17}\) Ibid.
primary informational asymmetry exists between the big merchant and the smaller merchants he is dependent on to distribute his wares. The smaller merchant will perhaps buy goods wholesale from the bigger merchant and sell them in retail markets. The problem, again, arises from the fact that the retail-level merchants often cannot fully pay upfront for the goods and must rely on credit from the wholesaler. Without this credit, the retailers would soon be insolvent, their businesses would fold, and ultimately so would the wholesaler’s, who relies on them. Nevertheless, there is a risk that retailers will simply take the advance and run and the creditor cannot a priori determine which retailers can be trusted.

Due to a relational contract between his agents, the paikars, and the small merchants, the creditor can effectively manage this risk. Through relational exchanges such as gift giving between paikars and small merchants, the paikars ascertain the “type” of merchant and thereby diminish the risk of losing the advance. This can be accomplished through the repeated personal interaction that relational exchange necessitates. It may also be underpinned by a reputation system, which, as elucidated in the preceding chapter, defines and reinforces the supervenience between gift giving behaviors and character types. These kinds of relational contracts really did exist; what follows is, for us, a particularly interesting example of one:

In the socio-economic rite of Pungaha of the merchants of the different districts of Bengal, fish occurs as a sacred object. On the first say of the year every merchant invites his habitual customers to his shop on a friendly visit and also [expects that those who have had credit] will pay some money on this day. A plate is kept for this purpose on which the creditor [presumably the one who has received credit] is to place his part of the due. By the side of this
plate, in a vessel filled with water, a few living fishes are kept both as sacred
objects and auspicious symbols.  

Here, again, is a relational contract that resembles a kind of discretionary gift giving—the inclusion of fish as a culturally significant auspicious symbol is, to say the least, intriguing. While there is no date affixed to this observation, it seems to concern a political economy similar to the one described by Buchanan-Hamilton and therefore seems relevant to our study. The fact that there is no explicit requirement to gift a minimum amount suggests a level of discretion that is typical of relational contracts. Rather than a contractually agreed upon requirement, there is only an expectation that something will be gifted. This leaves room for giving generously, perhaps in the hope of cultivating trust, or giving a little less during leaner times, with the understanding that more will be given when times are better.

The logic of this kind of exchange, and its effectiveness in overcoming informational asymmetry, is based in the differing demands of rationality on different “types” of merchants—the rational opportunistic merchant, for example, will tend to minimize on gift giving. In this way, by connecting behavior to character type through the demands of rationality, relational exchange overcomes the information asymmetry problem. As detailed in the previous chapter, over time, relational gift exchange can come to incorporate a reputational system that incentivizes desirable behavior through reputational costs and benefits. The case described by Buchanan-Hamilton does somewhat differ from that of customary fishing in that the problem can be framed as

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one of efficient risk sharing between a principal (the big merchant) and an agent (the *paikar*). Buchanan-Hamilton’s “great dealers” put the entirety of the risk of the advance on the *paikars*. The key point, however, is that this was an efficient distribution of risk between merchant and *paikar* because the *paikars*, unlike the big merchants, had relational contracts with the retailers that allowed them to effectively solve the asymmetric information problem.

The transacting problems faced by the merchants of Dinajpur are very similar to those described in our analysis of customary fishing. The main point as it pertains to markets in nineteenth century Bengal, however, is worth spelling out further. While prices constitute the paradigmatic information economy, systems of relational contracting also served a parallel and essential informational function in pre-colonial Bengal. Relational contracts provided valuable information on the preferences and character of potential transacting partners in the absence of fuller markets where Hayekian price competition could perform this function. In the absence of effective third party contract enforcement and in the absence of competitive markets, relational contracts were essential to market exchange. By facilitating the extension of credit, these kinds of contracts were integral to the establishment of markets and networks of trade in Bengal. In other words, relational contracts allowed there to be fairly developed markets at all.

In the following few sections, I characterize the profound changes in supply and demand that occurred in nineteenth century Bengal. On one level these can be conceptualized as shifts in the supply and demand curves *a la* the classic graph from Economics 101. However, on another level, these shifts entailed revolutionary alterations of a higher order than simple adjustments in the determinants of supply and demand.
Markets expanded and proliferated and the structure of supply chains grew more complex. Furthermore, as I shall later argue, prevalent modes of contracting changed and significant confusions arose regarding rights and justice. The causes of these changes were an admixture of demographic, technological, and policy-related factors. All of this, in turn, led to the conflict and confusion that characterized mid-nineteenth century Bengal, which, for us, culminates in the dissolution of customary fishing.

The Proliferation of Markets

On September 29, 1862, the Eastern Bengal Railway Company opened the first rail line in Bengal.19 The line ran from Calcutta to the town of Ranaghat, which is today near the India-Bangladesh border. By the 1870s, the line had been extended farther east to the town of Kushtia in present-day Bangladesh. The lay of the land was changing; business and trade were being conducted and coordinated over larger areas and markets were becoming more central to everyday life. There were also, consequently, growing opportunities for windfall profits.

By the turn of the twentieth century, the population in certain parts of the Calcutta metropolitan area was growing at four or five percent per year on average.20 Meanwhile, the population of Dhaka increased by over fourteen percent between 1872 and 1881.21 The unprecedented urbanization beginning in the mid nineteenth century would have created a tremendous problem of supplying the needs and wants of the new urbanites. The sudden necessity for a structure of supply that could reliably provide

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20 Constructed from Indian Census data from 1901 and 1911.
21 The mean population growth for all districts in Bengal over that period was about 7.8%. Indian Census of 1881.
desired goods to the ever-expanding cities of Bengal would have presented an opportunity for significant profits. Indeed, if anecdotal family histories are anything to go by, many who took on the hard work of supplying the burgeoning urban center became very wealthy and were able to become urbanites themselves. They would join the ranks of the new educated elite within one or two generations.

Outside of the urban centers, British rule had seen the conversion of much arable land towards the cultivation of cash crops like indigo and opium. Whereas in the past, *rayats* had been able to derive their subsistence directly in kind from their agricultural labor, cash-crop cultivators received their entire payment in cash. Consequently, there was an increasing monetization of the economy and a greater impetus towards the development of markets. The *rayats* who worked on cash crop plantations, like the new urbanites of Calcutta and Dhaka and unlike the *rayats* who were paid in kind or who subsistence farmed, now had to interact with markets for their sustenance. There was thus, beginning in the early nineteenth century, an unprecedented efflorescence of markets in Bengal. Notably, once the relevant market structures and supply chains were established, the potential for profit from, say, expanding a commercial fishery was much greater than it had ever been before. For example, a riparian owner close enough to Calcutta or Dhaka could, if he was able to market his fish in the city, reap previously unimaginable profits from the new and increasingly wealthy urbanites. Similarly, many riparian owners in entirely rural areas could now profitably market more fish to the *rayats* of a local cash crop plantation.

So, markets were proliferating and the system of price was, accordingly, bringing more and more Bengalis into its scope. Importantly, as elucidated in the previous chapter, the primitive state of markets had, in pre-colonial times, demarcated a natural
limit to the potential profitability of fisheries. With the development of markets, however, this limit was being significantly weakened. The British, noting the cultural significance of fish in Bengal, were perhaps the first to identify the potential profitability of the fisheries of the region. Part of Buchanan-Hamilton’s mandate was, after all, to survey the fisheries and identify opportunities of augmenting revenue through them. Indeed, by 1859 the British had begun to farm out riparian holdings in the Gangetic delta to extract rents from fishery operations. The limitations of markets had been an important factor in motivating the implicit contract of customary fishing self-enforcing between zamindar and rayat. The proliferation of markets entailed a strengthening of the profit motive for riparian owners, but at the same time, it weakened the stability of customary fishing and made forced enclosure potentially profitable.

The development of markets in nineteenth century Bengal as described above was largely brought on by the involvement of the British. The advent of the railroad is a good example of how both technological and institutional innovations of the British came to have a bearing on Bengal. The technology of the steam locomotive itself was, of course, developed in Great Britain. But the technology was worth little until it could be realized into a system of rail transport, which was a massive infrastructural endeavor. The British, again, provided the ingenious device of the joint stock company to make this kind of project possible. The Eastern Bengal Rail Company, brought into existence by an act of Parliament in 1857, raised an initial capital of one million pounds, in fifty thousand shares of twenty pounds each, to commence the work of bringing the railroad

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22 This project, for reasons that will be detailed later, met with a significant backlash and was abandoned by 1868. Pokrant, Bob, Peter Reeves, and John McGuire, “Bengal Fishers and Fisheries: A Historiographic Essay,” in Bandyopadhyay, Sekhar (ed.), Bengal: Rethinking History, New Delhi: Manohar Publishers & Distributors, 2001, p. 99.
to India. The British also had a major impact on the development of markets through establishing provincial currency mints, employing assay masters, and addressing many of the problems regarding irregular currency and weights detailed in the previous chapter.

Similarly, the British role in urbanization was significant. The urban centers in Bengal grew largely as a result of the immense transcontinental trade, especially in textiles and silks, of the East India Company and, later, various other British interests. As K.N. Chaudhuri explains:

Almost without exception the East India Company’s early factories in India were situated in cities and towns, or were very close to them…the officials of the East India Company found in Asian towns a focal point for both the necessary services in intermediate commercial transactions and their own need to co-ordinate all the physical arrangements demanded by the complex operational schedule of long-distance trading.

By the early 1800s, Buchanan-Hamilton notes, “the Honorable Company in every view must be considered as infinitely the most conspicuous among the merchants.” Indeed, by the time of Buchanan-Hamilton’s study, British operations had spread farther out from their trade centers into smaller towns and more remote cash crop plantations. These plantations, in turn, played an important role in extending the reach of markets in rural Bengal. Therefore, a market system which had been limited in reach in pre-colonial

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times and dependent on localized networks of relational contracts to function, was, largely due to the involvement of the British, undergoing a tremendous expansion that everyday made it a bigger part of more people’s lives.

Markets and Culture

To say that the British were instrumental in the creation of the overarching market structures is not to say that there was nothing distinctly Bengali about how all of this was unfolding. In fact, there is reason to believe that fisheries became particularly profitable as a result of urbanization mixed with the unique cultural significance of fish in Bengal. The phenomenon we are interested in is what Thorstein Veblen calls conspicuous consumption:27 “Conspicuous consumption of valuable goods is a means of reputability to the gentleman of leisure.” In the case of urbanization in nineteenth century Bengal, the uniquely Indian process of Sanskritization and its relation to the caste system guided patterns of conspicuous conception. That is to say, patterns of conspicuous consumption reflected a desire to imitate the customs, beliefs, and ways of life of the higher castes and thereby move up in the hierarchy of caste.

Because the theory of Sanskritization is likely unfamiliar to many readers, I include, in extenso, the original description of the phenomenon as elucidated by M.N. Srinivas:

The caste system is far from a rigid system in which the position of each component caste is fixed for all time. Movement has always been possible, and especially so in the middle regions of the hierarchy. A low caste was able, in a generation or two, to rise to a higher position in the hierarchy by adopting

vegetarianism and teetotalism, and by Sanskritizing its ritual and pantheon. In short, it took over, as far as possible, the customs, rites, and beliefs of the Brahmins, and the adoption of the Brahminic way of life by a low caste seems to have been frequent, though theoretically forbidden.  

Lower castes, then, through Sanskritizing their rituals were often able to rise in the fluid caste hierarchy. While vegetarianism was the norm for the Brahmins—the highest caste—of South India, where Srinivas conducted his ethnographies, Bengali Brahmins indulged heavily in fish. In fact, certain species of fish, such as *hilsa*, were central to some religious rituals of high caste Bengalis.  

Buchanan-Hamilton lists forty or so distinct castes in his study of Dinajpur. The castes are hierarchically arranged and organized by profession or trade. Buchanan-Hamilton’s descriptions of the interplay between caste and monetary wealth echo some aspects of Srinivas’s Sanskritization. While landowners tended to be from the highest castes and laborers from the lowest, by the 1800s, there were many in the middle of the caste hierarchy who were beginning to generate substantial levels of wealth that caused

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31 Notably, many areas in Bengal, including Buchanan-Hamilton’s Dinajpur, were majority Muslim. In Dinajpur and throughout Bengal, landowners tended to be Hindu. Islam in India, moreover, often incorporated certain Hindu practices, including caste. See ibid, pp. 91-94 on the Muslims of Dinajpur, see Bhattacharya, Ranjit K., “The Concept and Ideology of Caste among the Muslims of Rural West Bengal,” and Siddiqui, M.K.A., “Caste Among the Muslims of Calcutta,” in Ahmad, Imtiaz (ed.), *Caste Among the Muslims*, Delhi: Manohar Book Service, 1973, pp. 107-157 for caste in Muslim communities.
them to try to escape the stain of a lower caste background. Buchanan Hamilton writes of some of the lower castes of Dinajpur:

> Many of them are rich, which makes them bear their degradation with impatience, and the women of the money-changers are in general accused of holding their husbands in contempt, and of going astray with persons whose rank is more conformable to their fortune.

Rumors of the adulterous habits of the wives of moneylenders seem to be a far cry from processes of Sanskritization. However, this example shows that caste was a significant element in the broader understanding of status in Bengal, within which material wealth was another important factor. The accumulation of material wealth often led to behaviors aimed at enhancing caste status—in this regard at least, processes of Sanskritization were driven by the same phenomenon as patterns of marriage and interpersonal association, including, as Buchanan-Hamilton discreetly suggests, adulterous arrangements among the wives of moneylenders.

So, how does urbanization fit into all of this? Many of the nouveau riche, newly urbanized merchants, would have come from lower down the totem pole of caste than the typical Bengali bhadralok.\(^3\)\(^2\) However, the financial gains realized through their trade would have afforded them, in other regards, a similar social standing to the bhadralok. They would have thus perhaps had a similar class anxiety to the wives of moneylenders as described by Buchanan-Hamilton. These nouveau riche merchants, by adopting many of the ritual signifiers of high caste, were able to more completely acquire the full status of a bhadralok class within a few generations. This process of adopting caste signifiers is precisely Srinivas’s Sanskritization. Importantly, as we have seen, a major sign of high

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\(^3\)\(^2\) The term bhadralok, which literally means “gentleman,” refers to a bourgeois class that emerged with the ascendancy of the British in Bengal. The term bhadralok even today signifies wealth, high caste, and culture.
Caste in Bengal was the consumption and ritualistic use of certain types of fish such as the hilsa. So by consuming these fish and involving them in their religious ceremonies, the nouveau riche merchants did not simply show material wealth, they showed high caste and were therefore able to more fully present themselves as true bhadralok. Conspicuous consumption of fish was thus driven, at least in part, by a desire to Sanskritize—in other words, patterns of conspicuous consumption of fish were determined by the peculiar organization of the caste system in Bengal. Urbanization, insofar as it led to changes in the hierarchy of social class and therefore involved processes of Sanskritization, may have been a particularly powerful and compounding force in the development of fish markets in particular. Indeed, Sanskritization could help explain why the price of hilsa, a fish that was particularly important in various household rituals, rose so significantly in the late nineteenth century.33

The case of conspicuous consumption of fish detailed above is particularly interesting because it shows how changes brought on by British practice and policy mixed with preexisting local social constructs. That is to say, British policies led to the overarching trend of urbanization that necessitated more extensive market structures, which, in turn, conferred wealth on those who could provide them. But the process of Sanskritization that guided the conspicuous consumption of the nouveau riche merchant was a uniquely Indian phenomenon. So, while the general logic of the expansion of markets is universal, the fact that it was fisheries, of all trades, that became particularly profitable in this case was a result of the special cultural constructs of Bengal that, for whatever original reason, conferred caste-specific ritual value on certain types of fish.

So, to pull together the last two sections, because of changes in technology, demography, and the broader political economy of Bengal, markets became an increasingly important part of life throughout the eighteenth and nineteenth century. Fisheries became particularly profitable, and the incentive for zamindars and other proprietors to forcefully enclose riparian land would have been unprecedentedly high. As the analysis of the previous chapter indicates, this fact in itself would have been a threat to the stability of customary fishing. This incentive effect, however, is not enough to lead to the kind of turmoil that characterized the Bengali countryside of the mid and late 1800s. Why, for one, were rayats, whose labor had been so highly valued, not able to effectively bargain for a consensual adjustment in the implicit contract of customary fishing? Why did the established relational contracts between honest rayat and zamindar suddenly fall apart? Indeed, these had sometimes built trust over generations—they had provided, as we have seen, an underpinning for practices as diverse as customary fishing and the giving of advances between merchants. Why did they dissolve so quickly and suddenly?

The Dissolution of the Customary Order

Conflict and Cooperation

In the previous chapter, the problem at hand was one of contract enforcement. Both the zamindars and the honest rayats agreed that customary fishing, defined by an implicit relational contract based on seasonal usage patterns, was the desired outcome. In the old days, the zamindars had nothing to gain and much to lose by forcibly expanding or enclosing their fisheries. The challenge was to minimize the potential for abuse by
dishonest rayats. Since there was no effective third party enforcement, the contract had to be made self-enforcing. This was done through the introduction of a relational contract, a periodic gift exchange, between the zamindar and rayat. This relational contract overcame the informational asymmetry between zamindar and rayat—it allowed the zamindar to quickly and effectively identify rayats by type and reliably minimize damage from opportunist behavior. Through the relational contract of gift giving, abuse of customary fishing was minimized, potential problems of adverse selection were avoided, and the customary fish order as a whole was made self-enforcing and stable.

The proliferation of markets and the development of fisheries caused a major change in this framework: the zamindars were no longer happy with the customary fishing regime as it had always existed. In many parts of Bengal, riparian proprietors for the first time saw opportunities for windfall profits by forcibly enclosing beels and jheels towards exclusive year-round fishery use. But they still generally needed rayat labor to work their fields and estates. The problem was thus one of conflict within cooperation. That is to say, there were mutual gains to be made from cooperation but at the same time the distribution of the cooperative outcome was a matter of contention and conflict. Notably, to contextualize this study in terms of another analytic tradition, this opposition is, by Marx, the central dialectical contradiction of pre-communistic production and a driving force of societal change.34

In Bengal, this conflict, insofar as it posed an obstacle to reaching any cooperative outcome at all, threatened to destroy the value to be gained by both parties from cooperating. Zamindars vied for increasing enclosure of fisheries while rayats struggled to hold on to the old patterns of use. There was, in a sense, a bargaining

situation being created that had never existed in the days when zamindar and honest rayat alike agreed on and accepted the patterns of use under customary fishing. I first turn to the question of why rayats were not able to effectively bargain for more favorable terms in the readjustment of customary fishing following market expansion.

**Zeuthen’s Principle: Bargaining and the Costs of Conflict**

An analytic method that will help make clear how it was that the rayats came to lose out in the readjustment of customary order is one due to the Danish economist Frederik Zeuthen.\(^{35}\) In this section, I present it as an abstraction, focusing on the key result, what Harsanyi refers to as Zeuthen’s Principle;\(^{36}\) the next few sections will be devoted to coloring it in with the realities of life in Bengal. Zeuthen’s game depicts two players who are trying to reach agreement while engaging in a bargaining process.\(^{37}\) If they can reach some agreement \(A\), they will each receive payoff \(U_i(A)\)—on the other hand, failure to reach an agreement results in conflict, which gives payoff \(U_i(C)\).\(^{38}\) The game progresses in stages, with each player proposing an agreement to the other at each stage \(k\). In general, each player prefers his own agreement to the agreement proposed by the other player, which, in turn, is preferred over conflict.\(^{39}\)

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\(^{37}\) The description of the game presented here follows the one given in ibid, pp. 149-152.

\(^{38}\) We allow for any possible payoff vector \(U = (u_1, u_2)\) within the payoff space of the game so long as they can agree on how to divide the payoff. Ibid, p. 141.

\(^{39}\) \(U_i(C) < U_i(A) < U_j(A), i, j = 1, 2\) and \(i \neq j\)
At each stage $k+1$, each player $i$ has three options: (1) he can repeat his previous offer; (2) he can accept his opponent’s previous offer; or (3) he can make a new offer $A_{i,k+1} = A'$, which is, in terms of payoff to his opponent, between his own last offer and his opponent’s last offer.\(^{40}\) To choose either (2) or (3) is to make a concession, while to choose (1) is to refuse to make a concession. If both players pick (1), there will be conflict, both players will receive $U_i(C)$, and the game ends. Alternatively, if either or both players accept the opponents previous offer—they pick (2)—then there will be agreement at that offer and, for now, no further bargaining is required.\(^{41}\) In the case that one player plays (1) while the other plays (3) or both play (3), the bargaining process will continue to stage $k + 2$. The important question for Zeuthen was determining which player would have to make the next concession. The decisive factor in this decision, as it turns out, is how willing each player is to accept the risk of conflict.

The essential question for Zeuthen is whether each player will stick to his own terms or accept his opponent’s, so we can examine the simplified case where each player can either stick to his terms (1) or concede to his opponent’s (2). If player $i$ accepts his opponent’s offer, then he will receive $U_i(A)$ regardless of what $j$ does. However, to insist on his own offer is to risk conflict—if player $i$ plays (1) he may receive $U_i(A)$ or $U_i(C)$ depending on what the other player does. In making this decision, each player tries to anticipate what his opponent will do. Therefore, each player $i$ assigns a subjective

\(^{40}\) $U_j(A) < U_j(A') < U_j(A)$

\(^{41}\) In the case that both concede—that is, both play (2), or $i$ plays (2) and $j$ plays (3)—we assume that each receives a payoff according to his strategy. So, if they both play (2), the payoffs are $U_i(A)$ and $U_j(A)$; if $i$ plays (2) and $j$ plays (3), they are $U_i(A)$ and $U_j(A)$. These outcomes are not important for the analysis being done here.
probability, based on his best judgment, to what his opponent will do: let $p_j$ be the probability that player $j$ refuses to concede (1) and let $q_j = 1 - p_j$ be the probability that player $j$ acquiesces to $A_i$. Player $i$ can only play (1) to maximize utility when:

$$(i) \ (1 - p_j) * U_i(A) + p_j * U_i(C) \geq U_i(A)$$

That is, the expected value of playing (1) must be at least equal to the known outcome of playing (2). Rearranging, we get an equation for Zeuthen’s risk limit:

$$(ii) \ p_j \leq \ r_i = \frac{[U_i(A) - U_i(A_j)]}{[U_i(A) - U_i(C)]},$$

The quantity $r_i$ in (ii), player $i$’s risk limit, represents the highest risk player $i$ would willingly face and still refuse to concede. This quantity can be thought of as the ratio of the cost of conceding to the opponent’s terms over the cost of conflict. If $r_i < r_j$ then player $i$ is less willing to risk conflict than player $j$. Under the assumption of perfect information, both players will know this to be the case and player $i$ will be under pressure to make a concession while player $j$ will tend to stick to his guns. Therefore, Zeuthen’s proposed decision rule, called Zeuthen’s Principle by Harsanyi, is that player $i$ must make the next concession if $r_i < r_j$.

A key conclusion of Zeuthen’s model is thus that a player who is more hurt by conflict is in a weaker bargaining position than someone who is less affected, and will tend to concede to his opponent’s demands. Notably, while Zeuthen presents this conclusion as the result of a reasonable decision rule that stands by itself, Harsanyi extends Zeuthen’s analysis to show that the result is a necessary conclusion of following

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42 This method follows the approach of Bayesian probability. Each player $i$ has a belief that he assigns some initial probability, this probability is then updated in light of new data.

43 $r_i$ is therefore, given footnote 33 above, always between 0 and 1.
common rationality assumptions in game theory.\footnote{These rationality postulates, broadly, detail what rational behavior entails in the framework of game theory. I do not detail Harsanyi’s extension here—much of it has to do with applying a game-theoretic framework to further generalize Zeuthen’s theory. Harsanyi, John, \textit{Rational Behavior and Bargaining Equilibrium in Games and Social Situations}, Cambridge: Cambridge University Press, 1977, pp. 153-164, pp. 116-118.} Harsanyi shows that a player $i$ who tries to predict probability $p_{ij}$ in order to decide what he will do will necessarily arrive at Zeuthen’s Principle. In reaching this conclusion, Harsanyi frames the problem in terms of a system of reaction functions in only the independent variables $r_i$ and $r_j$.\footnote{By reaction function I mean the function that relates player $i$’s decision to player $j$’s decision.} The requirement of symmetric and mutually expected rationality—evident in the framework of anticipating the opponent’s actions to be utility maximizing, and maximizing utility accordingly—is therefore central to this outcome.

The key takeaway from Zeuthen is the importance of the cost of conflict to the relative bargaining positions of individuals. The development of fish markets set in motion a re-bargaining of the implicit contract of customary fishing. Similarly, beginning in the late eighteenth and early nineteenth century, there were frequent and drastic adjustments in, among other things, rates of rent and occupancy rights. In general, there was a re-bargaining of many aspects of the \textit{zamindar-rayat} relationship as British rule first began to take hold in Bengal. The pattern is not difficult to see: widespread expansion of \textit{zamindari} power through the first years of the nineteenth century with little \textit{rayati} resistance, followed by increasing conflict throughout the middle years of the 1800s, followed finally by increasing state oversight and a cessation of some of the more grievous \textit{zamindari} offenses in the late 1800s.\footnote{See, for example, Bose, Sugata, \textit{Agrarian Bengal}, Cambridge: Cambridge University Press, 1986, p. 20.} Harsanyi’s analysis of the Zeuthen game,
when properly colored with the historical realities of Bengal, will help us make sense of this arc of social transformation.

The Great Famine of 1770

The story of the re-bargaining of customary fishing and other aspects of the zamindar-rayat relationship begins with the calamitous famine that dismantled the order of the Bengali countryside between 1769 and 1773. No major famines were reported in Bengal until the arrival of the British. This is not because of a lack of record keeping under previous regimes—Bengal was, in fact, largely exempt from the major famines that ravaged Mughal India in 1343 and 1660.47 In 1769, however, crop failures arising from deficiencies in annual rainfall gave way to a devastating famine that would ultimately kill ten million Bengalis out of a population of about thirty million.48 On November 3, 1772, Warren Hastings, who would later become the first Governor-General of Bengal, wrote to his superiors on the collection of land revenue during the ongoing famine:

> Notwithstanding the loss of at least one-third of the inhabitants of the province, and the consequent decrease of the cultivation, the net collections of the year 1771 exceeded even those of 1768…It was naturally to be expected that the diminution of the revenue should have kept an equal pace with the other consequences of so great a calamity. That it did not was owing to its being violently kept up to its former standard.49

49 Quoted in ibid, p. 53.
As Hastings’ chilling comments suggest, British influence was decisive in bringing catastrophic famine to Bengal. By so stringently and violently collecting taxes, the British severely exacerbated the existing scarcity.

In pre-colonial Bengal, the inherent risks associated with natural variations in rainfall levels and periodic crop failures were effectively negotiated within existing institutions. Relational contracting, insofar as it afforded a great deal of flexibility and adaptability to changes in conditions, was relevant to anti-famine initiatives in pre-colonial Bengal. In pre-colonial times, local rulers and wealthy zamindars and merchants provided direct relief to those in need when times were lean. They often sold subsidized grain, provided work, gave out doles of food, forgave debt, and fixed prices to prevent short-term scarcity from turning into mass starvation.\(^5\) Under the customary relational system, it made sense for them to do this; after all, there can be no possibility for valuable future transactions between a given zamindar and rayat if the rayat dies in famine. Given all of this, local systems of relational contracting seem to offer a degree of protection against famine. While this kind of self-interest may have been a part of famine prevention in Bengal, there were also clearly humanitarian norms at play wherein wealthier members of a community had an obligation to look after those in need in times of scarcity.

The pressures of the exorbitant tax demands of the new British authorities proved too much for famine protection among the Bengalis. Whereas the land tax in England stood at between five and twenty percent of the rental in the hundred years

preceding 1798, in Bengal it was over ninety percent of the rental by the late 1700s.\textsuperscript{51} The British, moreover, were far more rigorous in their tax collection than their Mughal predecessors. While the last Mughal ruler of Bengal had realized land revenue of £817,553 in 1764, by 1794 the British were making £2,680,000 from land taxes in the same province.\textsuperscript{52} In the midst of crop failure in 1770, the tax was nevertheless collected rigorously and the East India Company undertook no famine protection measures.\textsuperscript{53} To make matters worse, gomasthas, Indian agents of the Company, monopolized the grain trade in an attempt to profit from the famine.\textsuperscript{54} Under such enhanced conditions of scarcity, zamindars and jotedars were hardly able to meet the violently enforced tax demands and feed themselves, let alone provide for the poorer classes of society. Bengali village communities were being torn apart.

Amartya Sen and Jean Dréze make the following observation of famines based on a large body of empirical work:

\begin{quote}
Famines are always divisive phenomena. The victims typically come from the bottom layers of society—landless agricultural laborers, poor peasants and sharecroppers, pastoralist nomads, urban destitutes, and so on. Contrary to statements that are sometimes made, there does not seem to have been a famine in which victims came from all classes of the society.\textsuperscript{55}
\end{quote}

The famine of 1770 was particularly divisive; it uprooted communities and destroyed the existing relational order. The district of Birbhum, for example, a previously populous

\textsuperscript{52} Ibid.
\textsuperscript{53} Ibid, p. 51.
\textsuperscript{54} Ibid, p. 52.
region in the western part of the province, was reduced to impassable jungle by the famine.\textsuperscript{56} Villages composed of families who had lived together for generations were uprooted, families forced by hunger to part ways and find work and food wherever it was available. Many Bengalis, even some landowners, turned to illegal and violent means of making ends meet.\textsuperscript{57} \textit{Dacoity}, a kind of armed robbery committed by groups and cults of brigands and thugs, became widespread throughout Bengal. In fact, the fear and chaos created by these robberies reached such an extent that in 1788 the British, under the Governorship of Lord Cornwallis, undertook a two-year long military campaign against the marauding groups of dacoits.\textsuperscript{58} The famine, caused largely by East India Company policy, exerted an almost complete divisive force—in parts of Bengal, it had turned the generationally stable order of village life into something resembling Hobbes’ state of nature.

The famine destroyed the system of relational contracting insofar as it caused significant migration, movement, and division amongst the Bengali people. Furthermore, many of the old \textit{zamindars} could not keep up with land tax demands and went into debt with the British authorities. The lands of the old \textit{rajas} in, among other locales, Pabna and Dinajpur, were seized and sold for arrears of revenue by John Company.\textsuperscript{59} A new class of \textit{zamindars} emerged. These were newly rich families who did not have the same claim

\textsuperscript{56} Fiske, John, \textit{The Unseen World, and Other Essays}, Boston: Houghton Mifflin, 1876, p. 200.
\textsuperscript{57} Ibid.
\textsuperscript{58} Ibid.
to nobility as the old *rajas*. They were usually absentee landlords who tended to see
their newly acquired land as a speculative investment rather than a generationally held
barony. Empowered by Permanent Settlement and backed by a colonial law that voided
all preexisting contracts between the old *zamindar* and tenants upon the sale of an estate
for arrears of revenue, these new *zamindars* often undertook a wholesale reorganization
of the lands. The famine then also caused a restructuring of Bengali society insofar as it
led to a reconstitution of the landowning class.

**Expected Costs of Conflict in Post-Famine Bengal**

The famine of 1770 was central to the *rayats’* loss of power in the early nineteenth
century. One way in which it was decisive was in its power to alter the expected costs of
conflict for the *rayats*. In continuing our analysis it will be useful to describe the Zeuthen
game in the context of the implicit contract of customary fishing. Prior to the
development of markets, as has been illustrated, there would have been no reason for a
re-bargaining of this contract—both *zamindar* and *rayat* agreed on the distribution of use
given by an agreement $A$, which, as we have seen, was built around seasonal patterns and
there was no bargaining problem at all. However, as the development of fish markets
began to take hold, the *zamindars* would have been dissatisfied with the existing contract
and proposed a new standard of use $A_i$, where $U_i(A) > U_i(A)$ and $U_j(A) < U_j(A)$, where
the *zamindar* is player $i$ and *rayat* is player $j$.

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60 Buchanan-Hamilton notes that most of the landholders in Dinajpur were of the
*kayastha* caste who were traditionally scribes, he notes that they used to manage “most of
the revenue and commerce of the country.” Buchanan-Hamilton, Francis, *A Geographical,
Statistical, and Historical Description of the District, or Zila of Dinajpur, in the Province, or

61 Sen Gupta, Kalyan Kumar, “Agrarian League of Pabna,” in Hardiman, David (ed.),
In pre-famine times the cost to the rayat of not accepting such an agreement—that is, the cost of conflict, would not have been terribly high. The rayat could simply move to a different area where the local zamindars, in need of cultivators, were perhaps more likely to hire him on more favorable terms. However, this situation would have changed considerably in the post-famine years. The cost of conflict in the years immediately following the famine would have been particularly high. Even the process of moving to a different area would have been fraught with danger—food remained scarce, there were bands of violent dacoits terrorizing the countryside, and elephants and tigers had extended their range as jungle reclaimed large swathes of previously civilized land.\textsuperscript{62} The zamindars, as they were typically able to eke out a living from their lands even in the worst of times, did not have to face any of these dangers from a breakdown in the re-bargaining of relations with the rayats.

In the years immediately following famine, however, markets and trade would have been devastated and there would have been little reason for the re-negotiation of customary fishing. Indeed, much of the re-bargaining of zamindar-rayat relations began to take hold in the early nineteenth century, twenty or thirty years after the famine of 1770. But the famine might still have had an affect on the costs of conflict decades after its occurrence. While the costs of conflict are taken as given in the Zeuthen game, it is realistic to see them as probabilistic hypotheses made by the players. That is to say, no one can say for sure \textit{a priori} what the outcome will be for the parties involved if zamindar and rayat fail to reach an agreement. Therefore, in making a calculation of these costs, each party calculates an expectation based on relevant evidence. The unprecedented

\textsuperscript{62}Fiske, John, \textit{The Unseen World, and Other Essays}, Boston: Houghton Mifflin, 1876, pp. 198-199.
famine of 1770, and ones that followed in 1783-84 and 1786-87,\textsuperscript{63} gave rayats, for many years after, good reason to believe that the costs of conflict could now be much higher than ever before.

By the early 1800s, when markets started to take off and zamindars began to re-negotiate various aspects of their relationship with rayats, the rayats—memories of famine devastation still fresh in their minds—would still have seen their costs of conflict as relatively high. Zamindars, moreover, would have been aware of this. Therefore, following Zeuthen’s Principle, rayats would have tended to acquiesce to the increasingly severe demands of zamindars and zamindars would have only grown bolder in their demands. Notably, this result is derived purely from mutually self-interested strategic behavior on the part of both zamindar and rayat. For the rayats, of course, it was more a matter of self-preservation, whereas for the new speculative zamindars it was about a newly minted profit motive.

Indeed the progression of rayat-zamindar relations in Pabna, the site of the 1873 uprising, follows the same pattern. The sale of the ancestral raja’s land to a group of new and more speculative zamindar families led to a period of rack-renting, imposition of arbitrary taxes, and physical coercion of the tenants to meet these enhanced demands.\textsuperscript{64} Yet the rayats of Pabna endured this state of affairs for decades before finally engaging in conflict in the uprising of 1873. The rise in perceived costs of conflict brought on by the famine of 1770, given the framework of a Zeuthen game, may help explain why Bengali rayats generally did not contradict moves by zamindars to claim more power over them in the early 1800s. This re-negotiation of zamindar-rayat relations occurred with regards to


rent practices, occupancy rights, and also customary rights such as those involving fishing. An important question that the Zeuthen game does not answer is how does conflict ever come about in these kinds of bargaining situations? To put it another way, since it is always in the interest of one party to concede, the game does not seem to provide any explanation for the observed phenomenon of conflict, in which each player only receives the conflict payoff $U_i(C)$.

The Emergence of Conflict: The Case of the Indigo Revolts

By the mutually rational, utility maximizing behavior detailed by Zeuthen’s Principle, conflict should never occur. The central topic of this chapter, however, is the development of conflict from a stable and consensually held outcome. So far I have shown how the development of markets, combined with the effects of famine, led to an adjustment in the old order. Yet by the early 1800s, outright conflict between zamindar and rayat was still relatively rare; for the most part, tenants silently bore the brunt of increased rents, arbitrary taxes, and an erosion of their customary rights. How did this situation, already sliding away from a consensually held outcome, end in out and out conflict? This is the question I now turn to. As it turns out, the Zeuthen Game framework remains useful with changing payoffs and, consequently, changing behavior.

An illustrative case of the development of conflict is the Indigo Rebellion of 1859. European planters, usually agents of bigger companies, operated the local indigo factories in Bengal. These planters would give advances to local rayats to help them pay rent to the zamindar. In return, the rayat was bound by contract, usually for between one

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and five years, to cultivate indigo in his land and hand over the crop to the factory. Advances were often given at usurious interest rates and many peasants, unable to pay back the advance, became bonded labor for the planters. Peasants were often coerced into these contracts by the planter’s hired thugs and dacoits or pressured into them by prominent villagers who had been bought over by the planters. This state of affairs was common in the Bengali countryside of the early 1800s. Planters employed armies of thugs, built profitable relationships with zamindars, and generally regarded the law with contempt. 66 The government, taken by the profits produced by indigo cultivation, turned a blind eye.

By the 1850s, however, indigo was becoming less profitable. Additionally, by 1861 a play called Nil Darpan (The Mirror of Indigo) was making the plight of the indigo peasants known as far away as London. The play was translated into English and other European languages and widely read in London and throughout Europe. In the introduction to the English edition, Dinabandhu Mitra, the author of the play and a member of the bourgeois bhadralok class, writes:

Oh ye Indigo Planters! Your malevolent conduct has brought a stain upon the English Nation, which was so graced by the ever-memorable names of Sydney, Howard, Hall, and other great men. Is your desire for money so very powerful, that through the instigation of that vain wealth, you are engaged in making holes like rust in the long acquired and pure fame of the British people?67

66 Note the influence of the famine of 1770 as a cause of the increased banditry and lawlessness that the indigo planters and some zamindars were able to capitalize on. Without the famine, it likely would not have been as easy for the planters to hire armies of bandits.
The writing and publication of *Nil Darpan* coincided with the indigo revolt. These revolts began in the Nadia district, today on the border between the Indian state of West Bengal and Bangladesh. Importantly for us, the revolts began when the local peasants came to know that the new Lieutenant Governor was sympathetic to their plight. On hearing this, they started to refuse to accept advances and this first act of defiance spiraled into a broader rebellion, often violent, against the planters and their agents.68

The Logic of Conflict

The case of the indigo revolt makes clear the growing importance of British authority and, especially, the incipient legal regime being set up in its name. Notably, this legal regime often developed in haphazard and contradictory ways through the nineteenth century. As an example, the British authorities in 1857 for the first time passed legislation that legally defined tenancy rights.69 Permanent Settlement had left tenancy rights completely undefined and consequently, whether willfully or not, facilitated zamindari abuse of rayats. The Rent Act of 1857 finally sought to correct this oversight, protect rayats, and foster better landlord-tenant relationships.70 Just three years later, however, the same legislative authorities passed the infamous Act XI of 1860, which gave magistrates criminal jurisdiction in cases of breach of contract and, in doing so,

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69 The specificities of the legislative system of the Raj will be detailed in a later chapter.
70 Among other things, the Act laid down criteria for identifying “occupancy tenants” who were given security of tenure and it called for all rent increases to be justified. See Swami, Anand V., “Land and Law in Colonial India,” in Ma, Debin and Jan van Zanden, *Law and Long-Term Economic Change: A Eurasian Perspective*, Stanford: Stanford University Press, 2011 p. 145.
effectively turned indigo cultivation into forced labor.\textsuperscript{71} The inherent ambiguity and ambivalence in the legal order of the colonial regime was central to the development of widespread agrarian conflict in nineteenth century Bengal.

The Zeuthen game assumes perfect information regarding the values of the risk limits $r_i$ and $r_j$, which means that each player knows both his and his opponents risk limit perfectly. One way in which conflict may occur, even among rational utility maximizing players, is in the presence of imperfect information. It will be useful to further expand the Zeuthen game in terms of the re-bargaining of customary fishing in beginning to explicate the relevance of imperfect information in the case of colonial Bengal. Specifically, while the Zeuthen game is concerned with conflict and cooperation, it does not specify what conflict may actually entail for the actors involved. In considering the conflict outcome, we must further elucidate what conflict involved for *zamindars* and *rayats* in nineteenth century Bengal. To that end, I have already suggested that the measure of the cost of conflict, which is so central to the outcome of Zeuthen’s Principle, is best thought of as a subjective expectation made by the actors based on relevant evidence. Given this formulation, it makes sense that a massive exogenous shock like the famine of 1770 would alter the expected costs of conflict for the *rayats* especially.

Another way in which expected costs of conflict might be altered is by strategic behavior by the actors themselves in case of conflict. We can define conflict strategies $\Omega_i$.

\textsuperscript{71} The act was passed during the height of the indigo revolts. Guha, Ranajit, *Neel Darpan* in Hardiman, David, *Peasant Resistance in India 1858-1914*, Delhi: Oxford University Press, 1992, p. 71.
and $\Omega_2$ such that: $c_i = U_1(\Omega_i, \Omega_2)$ and $c_2 = U_2(\Omega_i, \Omega_2)$,\(^\text{72}\) where $U_1$ and $U_2$ give the utilities for zamindar and rayat respectively. A conflict strategy imposed by the zamindar may involve incarcerating and physically torturing a non-cooperative rayat to increase his costs of conflict—similarly, rayats, if they are able to organize, may rise up violently against zamindari authority in the case of conflict. The conflict strategies $\Omega_1$, $\Omega_2$ therefore determine what the payoffs for each player will be in the case of conflict. Consequently, given the importance of costs of conflict to the determination of who makes the next concession, any player $i$ can extract concessions from player $j$ if he can play $\Omega_i$ such that $c_j(\Omega_i, \Omega_j)$ is sufficiently low compared to $c_i(\Omega_i, \Omega_j)$. In nineteenth century Bengal the colonial authorities and their system of laws largely defined what conflict strategies were available to zamindars and rayats.

For example, Permanent Settlement gave zamindars full proprietary rights and neglected to define the tenancy rights of the rayats. This was, moreover, within an ideological framework wherein guaranteeing property rights for the zamindari class was seen as a way of aligning the interests of that class with those of the British. Permanent Settlement was thus a way of ensuring that British power would take root within Bengali society.\(^\text{73}\) Under this state of affairs, a new class of speculative zamindars was allowed free rein over any dissenting or uncooperative rayats. In other words, during Permanent Settlement, the colonial law did not effectively limit the conflict strategies available to zamindars. Zamindars were able to, and often did, mete out violent punishment and intimidation to rayats. The effect of colonial laws on conflict strategies is also easily


\(^{73}\) Recall Alexander Dow’s words: “To give them property would only bind them with stronger ties to our interest, and make them more our subjects; or if the British nation prefers the name—more our slaves.”
apparent in laws like Act XI of 1860. That law, in making breach of contract a criminal offense, put the full punitive power of the state behind the zamindars and planters who sought to keep rayats from revolting against their exploitative contractual obligations.

By the mid 1800s, however, colonial legislative and judicial action was often in the aid of rayats. While laws like Act XI, which was repealed within a year, were clearly endorsed by elements of the British administration, there was a general tendency towards increasing protection of peasants. The fact that the Agrarian League of Pabna, the central force behind the Pabna revolts of 1873, was set up as a fund for litigation against landlords shows that the courts were being used by rayats against zamindari abuses of power by the 1870s. The courts, it seems, were particularly instrumental in the case of the Pabna revolts. As Sen Gupta notes:

A ruling given in a rent case in 1872 by the District judge of Pabna in favor of certain ryots [rayats] of Yusufshahi [the hamlet where the disturbances began] enthused the latter to a large extent, created among them a belief that the government was sympathetic to their cause and initially encouraged them to combine.75

As in the case of the indigo revolts, actions by British authority figures precipitated the outbreak of conflict in Pabna.

So, by the mid 1800s, there was already significant ambiguity in the actions of the British courts and legislatures in the matter of zamindari-rayat relations. This ambiguity, insofar as it affected conflict strategies, created a particularly acute situation of imperfect information regarding the costs of conflict. The zamindars, with decades of British

74 Hardiman, David, Peasant Resistance in India 1858-1914, Delhi: Oxford University Press, 1992, p. 16.
support behind them, anticipated the costs of any conflict between themselves and the rayats to be stacked against the rayats. In the case of conflict they believed they could mete out adequate punishment to their tenants—that is, fulfill their conflict strategies—with the full force of the law behind them. Increasingly, however, the colonial courts and legislature were beginning to favor the rayats. The rayats, picking up on this, in turn believed that now more than ever they could refuse to submit to the zamindar’s demands. We thus have a situation where both parties refuse to concede based on varying interpretations of the highly ambiguous and conflicting actions of the British authorities. This background of imperfect information regarding viable conflict strategies and, consequently, the costs of conflict, explains the outcome of conflict. In this way, both parties can persistently refuse to concede with still each believing that he is doing the best for himself.

The Dissolution of Customary Order

The dissolution of the customary order began with the devastating famines of the late 1700s. The famines were a significant shock to the existing customary system, which was based on modes of relational exchange and relational contracting. These famines, especially the famine of 1770, set in motion the series of events that culminated in the widespread agrarian unrest of the mid and late 1800s. In the case of customary fishing, a bargaining problem was introduced by the development of markets and increasing opportunities for profitable fishery operation. I have used the analytic framework of the Zeuthen game to show why the rayats lost out in the re-bargaining of customary fishing induced by market expansion and the famine and its aftermath. Zeuthen’s Principle, moreover, helps explain the marked change in the power dynamic between zamindar and
rayat in the post-famine years. The increasingly widespread conflict of the mid and late 1800s can also be understood through the lens of the Zeuthen game. Conflict often came about as rayats gained a better bargaining position through the actions of colonial authorities. British authorities, however, acted in unpredictable and ambiguous ways. This unpredictability created a situation of highly imperfect information regarding costs of conflict, which, in turn, led to the observed outcome of persistent conflict as both parties refused to concede.

The conflict regarding customary fishing was part of a broader struggle between rayat and zamindar. In addition to fishing rights, rents and occupancy rights were also at issue. The conflict over any one of these aspects, therefore, must be understood within the broader realignment of the zamindar-rayat relationship, within which all of these aspects were in play. The Zeuthen game is a way of grasping the broad arc of the realignment of the zamindar-rayat relationship. To that end, while I have used Zeuthen’s framework to make sense of customary fishing specifically, I have also drawn on other areas of conflict, such as the indigo revolts, to better highlight how the logic of the Zeuthen game played out throughout rural Bengal in the early 1800s.

The typology of zamindar and rayat has been retained for analytical convenience. In reality, many of the peasant uprisings, such as those against the indigo planters, were supported by some zamindars.76 Furthermore, there was an increasing stratification between wealthy rayats, who often were able to become landlords in their own right through increasingly common processes of sub-tenancies, and the poorer rayats who

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76 Hardiman, David, Peasant Resistance in India 1858-1914, Delhi: Oxford University Press, 1992, p. 15.
continued to cultivate the soil and live at subsistence levels. The power dynamic in Bengal was, therefore, far more complex than a simple zamindar-rayat framework can do justice to. Despite the changes, however, the zamindar and rayat remained powerful archetypes in the order of agrarian Bengal. In order to analyze the social structures of rural Bengal, we must find a mode of categorizing and differentiating elements within the increasingly complex and fluid reality—the zamindari-rayat framework remains the best such mode of categorization for the analysis undertaken above.

Changes in supply and demand, as detailed earlier in this chapter, coupled with famine, snowballed into all-encompassing social upheaval. Specifically, development of markets led to a bargaining problem between zamindars and rayats. This bargaining problem, as I have detailed through the framework of the Zeuthen game, ultimately led to the conflict of the mid and late 1800s. The analysis above shows how economic, social, and political factors were deeply interrelated in nineteenth century Bengal. Our analytic method has been based on utility maximizing, self-interested agents. This is not, however, an overly restrictive assumption; all it implies is that zamindar and rayat were broadly trying to do the best for themselves. But importantly, doing the best for themselves may involve varying ranges of qualitative behaviors. For the zamindar of the early 1800s it involved following the profit motive, while for the rayats of the time it involved shielding themselves from the disastrous consequences of the famine.

However, with increasing state support, by the mid 1800s “doing the best for themselves” for rayats involved standing up for their customary rights and refusing to concede to zamindari demands. It is not that the erosion of their customary rights was

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77 See Nakazato, Nariaki, Agrarian System in Eastern Bengal, Calcutta: K.P. Bagchi & Company, 1994, pp. 279-281, by Nakazato, this increasing stratification within the class of rayats is a fundamental aspect of social change in nineteenth century Bengal.
necessarily any less real for the compliant rayats of the early 1800s—rather, the specter of famine and the power of a new and British-backed zamindari class made conflict with zamindars a sufficiently destructive outcome that most rayats would not have considered it.\(^\text{78}\) As Guha notes, “the preparation of an uprising was almost invariably marked by much temporing and weighing of pros and cons on the part of its protagonists.”\(^\text{79}\) Even for peasant rebels, then, “doing the best for themselves” was a central concern.

The framework of strategic utility maximization works well for explaining the observed general arc of zamindar-rayat relationships in the 1800s. Through the Zeuthen game, we can account for the initial increase in zamindari power with only limited rayati backlash, as well as the eventual widespread conflict that gripped the Bengali countryside. This framework, however, is at least partly incomplete in that it says nothing about the issues of right and justice. The rioting peasants in Pabna, for example, were not simply trying to grab power and gain an enhanced bargaining position against the zamindars; they were adamant that injustice had been committed against them. The framework of bargaining seems to imply business and impersonal exchange, but the agrarian violence in nineteenth century Bengal was, if nothing else, based on highly personal grievances. In concluding my analysis of disequilibrium, I turn to the question of how issues of justice and right came to be so central to upheaval in Bengal.

\(^{78}\) Notably, there were sporadic instances of class conflict even in the early 1800s. The Islamic revivalist Titu Mir, for example, led a particularly violent insurrection against zamindari and British authorities in 1830. Titu Mir’s jihad was violently suppressed by the overwhelming force of the British military near the town of Barasat. See Guha, Ranajit, *Elementary Aspects of Peasant Insurgency in Colonial India*, Delhi: Oxford University Press, 1983, pp. 74-75, p. 80.

\(^{79}\) Ibid, p. 9.
Issues of Justice and Right

Right and Relational Contracting

Ultimately, peasant revolt was not just about strategic behavior or gaining bargaining power; it was about standing up against perceived injustices. The cry of injustice, and the fact that it had such resonance amongst rebels, was central in aligning individuals in insurgency. Without the aspect of right and justice, peasant rebellion in Bengal would have been toothless—it might have never occurred at all if only pecuniary matters were at issue. While the model presented above is a useful way to make sense of the broader phenomenon of revolt and zamindar–rayat conflict in nineteenth century Bengal, it does not adequately explain the basis of the peasants’ claim of injustice and what role this had in the broader conflict. Developing a full comprehension of peasant revolt in Bengal is outside the scope of this paper, but addressing the issue of right and justice will help us gain a better understanding of the broader conflict that took hold in nineteenth century Bengal. Moreover, issues of right and justice become increasingly important in the story of the development of fishing rights as cases of conflict begin to increasingly come in front of the Calcutta High Court by the 1880s. In all of these ways, the positive analysis of the evolution of fishing rights, which is the central project of this paper, requires consideration of normative issues.

The central question to be addressed in this section is, what to make of the peasants’ claim of customary right? In other words, when the rayats of Meherpur assert that they have a customary “right” to fish, how are we to understand what the

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80 A full paradigm of peasant revolt is most famously developed in Guha, Ranajit, Elementary Aspects of Peasant Insurgency in Colonial India, Delhi: Oxford University Press, 1983, which develops a historiographical method for studying subaltern groups.
What follows, in trying to explicate this, can be thought of as an archaeology of customary right. Customary right, I suggest, is tied into relational contracting, so in order to understand customary right we must again consider the operation of systems of relational contracts. To that end, MacNeil notes:

As contractual relations [relational contracts] expand, those relations take on more and more the characteristics of minisocieties and ministates...In ongoing contractual relations we find such broad norms as distributive justice, liberty, human dignity, social equality and inequality, and procedural justice, to mention some of the more vital. Changes in such contractual relations must accord with norms established respecting these matters...changes made ignoring these facts may be very disruptive indeed.

Norms concerning justice and right, by MacNeil, often are important aspects of relational contracting system. But how do these norms come to be established? This is the question I now turn to.

It will be useful to return to the concrete example of relational customary fishing. In that case, fishing was seasonally divided between commons use by \textit{rayats} and fishery use under \textit{zamindars}. Importantly, the seasonal usage pattern, which on the one hand had a purely economic rationale, was also overlaid by religiously charged customs. Communal fishing, for example, was central to the \textit{rayats'} celebration of the Bengali New Year. Perhaps we can imagine a time—“The Beginning,” as it were—when landholders

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83 Namely, fisheries operated in the dry season when fish were more confined and easier to catch.
and cultivators were like Mauss’ primordial men and women, transacting tentatively and unpredictably. In such a situation, it would be unlikely that the proto-rayats of the time would have made communal fishing such an important part of their New Year’s celebrations. Indeed, to do so would require quite a leap of faith, as the proto-zamindar might take issue and respond with violence. However, as the relationship developed over time and norms of use gained inertia by pure force of reiteration, customary fishing in the monsoon came to be combined with the New Year’s festivities. And, consequently, a festival that was unique to the peasants of Bengal and of great cultural significance came to be established.

This story follows Srinivas’ observation that “hereditary rights and duties [acquire] ethical undertones.” What start out as tentatively held practices that may help overcome certain transacting problems within a relational contract, turn into expectations over time. Persisting for centuries, these practices acquire cultural significance and come to define norms of right and justice within the broader contractual relation. They become both expected by individuals in a psychological sense and also expected by the broader culture—that is to say, they become integral to the practices that define the broader cultural framework that has, over generations, been built around the web of contractual relations. Therefore, while changes in norms of fishing, on the one hand, seemingly only constituted an economic reorganization, because of the established relational contract, they in fact constituted a disruption of culturally significant practices. Therefore, the rayats—those on whom this disruption is imposed—felt wronged and claimed injustice.

85 Keeping beels and jheels unenclosed, for example, helped attract labor, which was relatively scarce in pre-colonial Bengal, to zamindari lands.
In this way, the relational contract system that ebbed and flowed with the economic problems of the times was also ineluctably bound up in norms of fairness and justice. While previous sections have shown how economic matters were braided with socio-political issues in Bengal, now we can also see how concepts of fairness and right might have taken hold in ways that were connected to modes of economic organization. Without this moral angle, class conflicts in nineteenth century Bengal would not have been so personal and destructive. In the case of customary fishing, due to the development of markets and the effects of famine and its aftermath, a great confusion emerged regarding what was, in fact, right—that is, there was confusion regarding both who really owned what and what was and was not a legitimate basis for having property rights. While the rayats continued to see their customary rights as a cherished and culturally significant institution, the new zamindars, driven by the demands of profit, tended not to recognize any such rights that contradicted the profit motive.

This is not necessarily to say that there was an iron law of capitalism suddenly at play that compelled every zamindar to seek profit above all else with the same insurmountable inertia. Notably, it might have been in the long-term interests of zamindars to take account of the needs and wants of the peasantry and contract in ways that would have better avoided conflict and ensured greater future value. The fact remains, however, that zamindars in the late eighteenth and early nineteenth century found that they had many more avenues of profit than ever before and that they could push their interests on rayats more effectively than ever before—and this they, in fact, did.\textsuperscript{86} Describing how and why this happened has been the central project of this chapter. But in many cases it seems that zamindars went too far—their demands on rayats

\textsuperscript{86} Note that these were often new zamindar families that had settled the lands after the old zamindars went into arrears during early British rule and the period of famine.
were excessive to the point that *rayats* rose up in revolt. Thus, the self-interest that motivated the *zamindars* to push further demands on *rayats* became self-defeating at a certain threshold. It simply incited rebellion and, consequently, the immediate destruction of *zamindari* property as well as of future value from consensual contracting. But in other cases, such as the case of fishing rights, *zamindars* were ultimately able to reorder the structures of property rights to their favor by lobbying the British authorities. Whether the benefits from such a reordering of property, especially in the very long run, outweighed the costs of periodic conflict for *zamindars* is an open question that has no easy answer. However, it is clear that the possibility of this kind of state backed structural change in property rights meant that the *zamindar* who risked conflict and thereby risked future value was not necessarily acting foolishly. Colonial capitalism, iron laws notwithstanding, is an important part of the story here, as will become increasingly clear throughout the remainder of this paper.

**Right and the Dissolution of Customary Order**

The essential tension that is central to our analysis of disequilibrium is between the social nature of productive endeavors in agrarian Bengal and the contention over the distribution of the gains from production. Indeed, Zeuthen’s game is adopted as an analytical framework to understand this opposition as a kind of bargaining problem. Another aspect of this contradiction is, as Marx puts it, that “the capitalist mode of production has a tendency to develop the productive forces absolutely...regardless of

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87 How this happened in the case of fishing is the subject of the remainder of this paper.
the social conditions under which capitalist production takes place.\textsuperscript{88} These social conditions, as elucidated above, may be charged with norms of justice and fairness, which the capitalist, in following the profit motive, comes into conflict with. In Bengal, wealth maximization came into conflict with customary fishing in just this way—ultimately, either customary fishing had to go or the profit motive had to be circumscribed.

This perhaps makes it seem that the stability of customary fishing was extraordinarily weak. In one sense it was; the gift-exchanges only solved the contract enforcement problem on one side—that is to say, these relational exchanges prevented only the \textit{rayats} from overstepping the norms of customary fishing. The \textit{zamindar} did not need an institutional enforcement mechanism because, in the absence of markets and with scarce labor, he had no incentive to deviate from customary fishing. The fact that institutional solutions to enforcement problems are themselves subject to enforcement problems, given a change in the rules of the game, has been well noted in the economic literature.\textsuperscript{89} And what happened here can be seen as a change in the payoffs of the game. But, importantly, what we are describing as a payoff change in the context of our analytic framework was, in concrete terms, a profound transformation in the political economy of Bengal. No pre-colonial Bengali could have predicted the affects of British imperialism, devastating famine, expanding markets, mass urbanization, and the nexus of changes described above any more than he could have predicted that some day a metal carriage with a chimney, billowing smoke and piercing the air with its wails, would carry hundreds of men and tons of goods through the countryside. Customary fishing,

\begin{itemize}
\end{itemize}
therefore, was no more fragile than any other stable unplanned social outcome; like any such outcome, it could not account for changes that were inconceivable to the individuals who composed it.

We can directly introduce aspects of right and justice into our theory by conceptualizing moral costs that factor into the *rayats* calculation of what it means to do the best for themselves. Enclosure of waterways, under this account, is costly for the *rayats* not just because they can no longer fish in the *beels* and *jheels* for food and pleasure, it is also costly for them insofar as it makes them feel that an injustice has been committed against them. This feeling of injustice is what I call a *moral cost*. It seems to be the case, however, that moral costs did not accrue in the way that pecuniary costs do. It is not that one additional unit—whatever that may mean in this context—of moral cost tipped the scale towards peasant revolt in any given occasion. Rather, the deep opposition between the logic of wealth maximization and customary right introduced endemic moral costs, which, at various times and for various reasons, even when factored into the broader calculus of “doing the best for oneself,” were liable to fuel upheaval rather than continued cooperation.

The case of the Santal uprising is a prime example of how moral costs tended to spiral suddenly. The Santals were an indigenous tribal people who had traditionally lived in remote parts of Bengal through subsistence hunting and gathering. Trouble with the Santals began during the time of the construction of the Eastern Bengal Railway in the 1850s. While their labor was used in the construction of the railways, railway officials treated them particularly poorly—a commission appointed by the British to investigate the causes of the rebellion blamed “the unwarrantable conduct of some of the railway
employees, who insulted their women and refused to pay the Sonthals [Santals].”\(^{90}\) While their experiences with the railway may have more immediately precipitated the rebellion, discontent among the Santals was more general. The charismatic leaders of the insurrection, the brothers Sido and Kanhu, described their grievances:

- The *Mahajuns* [big traders and moneylenders] have committed a great sin. The *Sabibs* [British] and the *amlab* [zamindari agents] have made everything bad, in this the *Sabibs* have sinned greatly. Those who tell things to the Magistrate and those who investigate cases for him, take 70 or 80 Rs. With great oppression in this the *Sabibs* have sinned. On this account the *Thacoor* [God] has ordered me

saying that the country is not the *Sabib’s*.\(^{91}\)

The “sins” described by Sido and Kanhu echo the protests of *rayats* throughout Bengal. The Santals faced many of the same abuses by moneylenders and *zamindars* that have been described throughout this chapter in the context of *zamindar-rayat* relations. Notably, the grievances of the Santals may have been particularly acute as, through the expansion of *zamindari* and colonial authority, they were losing the autonomy that they once had, whereas *rayats* had always been part of a broader social fabric of rural Bengal.

- The Santals were known for “their industry, their perseverance, their love of order, their inquisitiveness, [and] their joviality.”\(^{92}\) However, Sido and Kanhu, through their charismatic leadership, managed to mobilize 30,000 of these supposedly meek people and turned them into an army that then engaged in active warfare with British troops.\(^{93}\) While their rebellion was quashed particularly brutally by British troops,\(^{94}\) the

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\(^{93}\) Ibid, p. 437.
case of the Santals begins to show how moral costs in Bengal were liable to suddenly balloon so long as the deep and inherent contradictions between the old and the new ways existed and were reflected in modes of economic organization.

The question that I am getting at is: why did conflict and revolt occur in certain particular instances and not in other similar ones? And relatedly, what caused order and cooperation in a given particular setting to so suddenly and violently break down in particular points in time as opposed to others? The Zeuthen game framework suggests how the actions of British authorities might have been a determining factor in this. The case of the Santal rebellion suggests another possible element that begins to get to the heart of my point about moral costs. In the case of the Santals, as well as the case of an early rayat rebellion under Titu Mir in the 1830s, charismatic leadership was an important element. But for charismatic leadership to be as effective as it was, it needed to deliver a message that had a broad resonance among the rayats and other subaltern groups of people such as the Santals, who had overlapping or related claims of injustice. This resonance, I am suggesting, came from the contradictions between the customary ways and the ways of colonial capitalism, and the endemic moral costs that this introduced. These moral costs were felt by rayats as the new zamindari authority systematically ignored culturally significant practices and norms of fairness that had

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94 Ibid, p. 439, the Santals generally fought with bows arrows and spears, while the British army was disciplined and armed with guns and artillery—the suppression of the rebellion was a bloodbath that killed thousands of Santals.

95 See footnote 76 above, Titu Mir united many of the rayats of Barasat against zamindari and British authority and engaged in violent open warfare much like the Santals under Sido and Kanhu. Notably, Titu Mir’s rayats did this at a time when conflict and insurrection was not yet widespread in the Bengali countryside.
taken root in the customary system. While moral costs did not always and everywhere cause revolt and conflict, given particularly charismatic leadership or validation from elements within British authority, they were liable to balloon in ways that seem unpredictable and unexpected.

Conclusion

Disequilibrium Comes to the Courts

I have shown above how shifts in the structures of supply and demand were bound up in socio-political and moral issues in nineteenth century Bengal. The evolution of fishery rights was thus a part of a broader societal shift that was characterized by confusion, contradiction, and conflict. I have shown how the expansion of markets took hold, why fisheries may have been particularly affected due to cultural reasons, and progressed to an analysis of the re-bargaining of *zamindar-rayat* relations and the development of conflict. Issues of rights and justice, as I have shown, were bound up with modes of economic organization. Specifically, the ineluctable opposition between the demands of wealth maximization and of customary rights led to a situation where moral costs were endemic and sometimes ballooned and fueled peasant insurrections. In this way then, what started as a simple adjustment of supply and demand escalated into all-encompassing societal upheaval.

Moreover, it made sense for *zamindars* to do this because of the possibility of a state-backed reordering of proprietary rights and relations, the rest of this paper will illustrate how this happened in the case of fishing.
The Raj, responding to the conflict and confusion brought on by the peasant revolts of the mid 1800s, instituted the Bengal Tenancy Act of 1885. This act, more so than any in the past, attempted to recognize and standardize the various kinds of tenancies that took place in Bengal. The goal was to further protect the _rayats_ from rampant _zamindari_ exploitation and quell the rioting, which posed a threat to British authority. The conflict, however, would not be completely solved by the Tenancy Act. The issue of customary fishing rights first came before the Calcutta High Court in 1886. Over the next three or four years, the High Court, staffed by men like William Comer Petheram and Chunder Madhub Ghose, would develop a rule that addressed the issue of fishing rights in Bengal. Who could fish in which waters? What constitutes theft of fish? These are the kinds of questions this rule would come to address. Armed with an understanding of the logic of customary rights and the dissolution of the customary order, I now turn to an explication and analysis of this rule in the next chapter.

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97 Specifically, the legislative council of Bengal, which was largely made of appointed Englishmen, passed the act. A more detailed account of legislative procedures in colonial Bengal will follow in a later chapter. Rampini, R.F., and M. Finucane, _The Bengal Tenancy Act: Being Act VIII of 1885 (As Amended by Act VIII of 1886)_ , Calcutta: Hacker, Spink & Co., 1889.
Introduction

A Shift in Aspect

There are two overlaid aspects coloring the long history of Bengal. On the one hand the conquering force vying for control of the land writes its own chronicles, while on the other individuals in day-to-day agrarian life compose an entirely different narrative. Facets of agrarian life survive for centuries largely independent of the rules imposed by the changing state authorities, while, at the same time, certain state actions can have profound affects on the day-to-day. Customary fishing, as explicated in the first chapter, was stable for centuries largely independent of ruling authorities. However, as shown in the second chapter, the actions of British authorities played an important part in its destabilization. Whereas the last two chapters focused on the structures of day-to-day agrarian life in Bengal, the next two focus on the workings of British institutions and their response to the conflict surrounding customary fishing.

The “day-to-day”-ness that is central to agrarian life is eroded as we move from the villages and towns of rural Bengal to the newly constructed grand halls and courts rising with British authority. As James Joyce once wrote, “life is many days, day after day. We walk through ourselves, meeting robbers, ghosts, giants, old men, young men, widows, brothers-in-love, but always meeting ourselves.”¹ Through the day-to-day we must meet and come to understandings with others who, whatever else they might be,

are fundamentally like us in some basic sense. And indeed, while the kings and generals lay out their grand strategies, the arc of some sweeping narrative determining their every move, the unsentimental concerns of the day-to-day guide the actions of villagers and rule the order that they compose. The zamindars and rayats, as they engage in relational exchanges over generations and build personal bonds of trust, become, to each other, more than zamindar and rayat—they become people. The sense in which each individual is a replaceable, movable, functional part within some broader mechanism is lost in the face-to-face humanity of everyday interactions. It is, of course, not that men like Warren Hastings and Alexander Dow lacked experience of this kind of face-to-face humanity. Rather, it was their job, as administrators, politicians, and social engineers tasked with establishing imperial power, to see the large mechanism—the moveable and replaceable parts of society—over the individual instances of humanity.

This chapter is about how the conflict over fishing rights was addressed by the Calcutta High Court. Unlike Hastings and Dow, the judges of the Court were not social engineers directly tasked with establishing imperial power. Rather, they were jurists trained in the principles of English law and committed to establishing lasting order and justice in India. Notably, they based their legal reasoning on English law as well as any relevant peculiarities of Bengal, be they geographical, cultural, or otherwise. This approach, in the case of fishing rights, led to a sound legal principle that largely mirrored the customary arrangement of seasonal customary fishing. It was not based on class interests and it allowed for consensual bargaining between rayats and zamindars, and, consequently, the establishment of varying structures of proprietary relations from place to place. While the rule created by the judges was soon overturned by the colonial legislature, in this chapter I explain what it involved, track how it was developed, and
explore the kind of political economy it might have created. I first turn to the relevant court cases and then commence an economic analysis that looks at the interconnections between the ends of economic efficiency, voluntary exchange, and distributional equity, and how these ends were realized by the rule developed by the High Court. Moreover, my analysis explores the complementarities between relational contracting systems and the ends of economic efficiency and voluntary exchange.

A Public Right to Fish

In England, the public right to fish applied to the seashore and all tidal rivers. Halsbury’s Laws of England, an influential and comprehensive compendium of English laws first published in the early 1900s, notes:

The soil of the sea between the low-water mark and so far out to sea as is deemed by international law to be within the territorial sovereignty of the Crown is claimed as the property of the Crown. The soil of the bed of all channels, creeks, and navigable rivers, bays and estuaries, as far up the same as the tide flows, is prima facie the property of the Crown. The Crown can grant, and in many cases has granted, the soil below the ordinary low-water mark to subjects, but such a grant is subject to the public rights of navigation and fishing and rights ancillary thereto existing over the locus of the grant.2

In England, the Crown held the seashore and the tidal river system in the public trust—public rights to navigation and fishing were paramount and any transfer of private riparian holdings in tidal systems was bound to these servitudes.3 Waterways that were not held by the Crown in this way, such as non-tidal lakes, ponds etc., were not subject

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3 “Servitude” refers to an obligation that is tied to ownership of the land and passes with the ownership.
to a public right to fish. That is, landowners along these bodies of water could stop members of the public from fishing in these waters.

The requirement that rivers be tidal in order for the public right to fish to exist was contentious throughout the nineteenth century and appeals to a public right to fish were often made in non-tidal rivers such as the upper Thames. Moreover, there was no consensus as to whether “tidal river” referred to a river in which the effects of the tide were discernible through water levels measured vertically, or whether it was sufficient that the horizontal flow of the river was influenced by the tides. All of this notwithstanding, because of the centrality of a public fishing right in England, colonial jurists trained in the English law invoked a public right to fish in Bengal that, through the 1860s, hampered the imperial Crown’s attempts to liberally farm out exclusive fishing rights in Bengali rivers.

The history of a public right to fish goes back at least to the sixth century *Digest of Justinian*. That work gives an account of how a seller of an estate in Byzantium had contracted to retain an exclusive right to fish off the waters of the estate as a condition of its sale, but the Roman jurists, in denying this right, noted, “a servitude cannot be imposed by private agreement on the sea, as by nature it is open to all.” By the late 1800s, a public right to fish had been long established in England and, by one source,

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4 Moore, Stuart A. and Hubert Stuart Moore, *The History and Laws of Fisheries*, London: Stevens and Haynes, 1903, p. 153. It was decided in the case of Blount v. Layard (1891) (2 Ch. 681) that customary fishing in the streams and creeks of the upper Thames could be a case of adverse possession—that is, it was an admissible defense against a charge of trespass due to the tacit consent of landowners over the years—but that it could never be held to be a public right.

5 Ibid, p. 98.


traced its origin to Roman law as presented in the *Digest of Justinian*.\(^8\) Whatever its true origins, by the 1880s, the public right to fish in England was understood as stemming, most proximately, from the Magna Carta. The tying of the public right to fish to Magna Carta gave the right a constitutional significance in England.

A complicating element in applying the public right to fish in Bengal arose from the differences in geography between the Bengali wetlands and England. Whereas in England a lake was a lake and a river was a river, in the Gangetic delta, lakes—or rather, *beels* and *jheels*—often became joined to the broader tidal river systems during the flooding of the wetter months culminating in monsoon, while they remained enclosed by land in the dry season. Fishing in lakes was not covered by the public right to fish in England,\(^9\) but then again, in England there were no lakes that merged with tidal river systems during certain times of the year. How a public right to fish could exist in Bengal, with its seasonally morphing water bodies, was therefore an important and difficult question. In the cases that follow, British authorities, often at the behest of Bengali landowners, brought criminal charges against peasants for fishing in their privately held *beels*, but how privately held could these *beels* be when during a part of the year they became part of a river in which the peasant, as a member of the public, had a right to fish? Moreover, in such a situation, in what sense could these landowners be said to be in possession of fish when the fish could move freely through the river system and in and out of his land? These geographical considerations were a significant element in the development of a legal rule regarding fishing rights in Bengal, to which we now attend in detail.

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Fishing for a Rule in the Calcutta High Court

*Mudhoo Mundle v. Umesh Parni*

The first two fishing cases to come before the Calcutta High Court in the 1880s both took place in Meherpur. Meherpur is a town in the area of what is today the border between India and Bangladesh. The Jalangi River runs through the region and, during the monsoon months, mingles with a large local *beel* that was central to both controversies. In the earlier Meherpur case, *Mudhoo Mundle and Others v. Umesh Parni*, also known as the Meherpore Case of 1886 following the anglicization conventions of the time, a number of villagers who had gathered together for customary fishing during the Bengali New Year were arrested, summarily tried under the criminal law for theft and unlawful assembly, convicted, and sentenced to fines, imprisonment, and whippings. The problem of how to reconcile claims of customary right with the working of the formal law was raised in the judgment of the Assistant Magistrate who initially tried the case, before appeal to the Calcutta High Court:

The Assistant Magistrate in his judgment stated that there had been a number of similar cases, in some of which the defence had been set up that it was the custom for the villagers to fish in the various *beels* on the 1st Bysack [Bengali New Year], but he found that, though such had been the case, it had not been done with the consent of the zemindars [zamindars], and in some instances compensation had afterwards been paid to the owners of the *beels*, and there could, therefore, be no doubt that private rights had been invaded.

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In this case, the Assistant Magistrate was clearly trying hard to make sense of customary rights and how they relate to formal property rights. However, without an understanding of relational exchange and the pre-colonial political economy of agrarian Bengal, he sees the centuries old custom of communal fishing as nothing but an invasion of private rights.

Notably, the suggestion that some kind of compensation had been voluntarily paid after the fact seems to fit with our descriptions of relational exchange within the community rather than a one-time payment for an invasion of a private right. From the magistrate’s point of view, this looked like an implicit recognition by the villagers of having fished on private waters. While we cannot rule out this interpretation, we can situate the events of the case in the context of a generationally ongoing relational exchange within which continual communal fishing was an expected outcome of gift giving. Given this context, even if we see the villagers’ payments as recognition of invading private property, it is difficult to sustain that this “invasion” amounted to a criminal act since it was made within a complex *bona fide* relational exchange framework, which the villagers thought governed their relations with the *jalkar* owner and the norms of fishing. Again, the magistrate was clearly ignorant of all of this.

Interestingly, along with theft of fish, the defendants in *Mudboo Mundle* were tried for unlawful assembly, which under the Indian Penal Code required that they have a common purpose to commit criminal harm.12 Indeed, *zamindari* and colonial authorities often abused the “unlawful assembly” section of the Indian Penal Code to prevent any and all large autonomous gatherings of peasants.13 This abuse of the law was, in fact,

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13 Guha, Ranajit, *Elementary Aspects of Peasant Insurgency in Colonial India*, Delhi: Oxford University Press, 1983, p. 120.
deemed official policy by some elements in the highest echelons of colonial authority. As the Governor of Bombay noted in his minute of 14 June 1853:

It may be necessary here to check the commission of such a crime by severer penalties than would be had recourse to in England and certainly the danger to the ruling power in this Country from a tumultuous assemblage of thousands is greater [emphasis in original] and the measures necessary to meet it involve far more expense and trouble than a corresponding movement by a mob would cause at home.\textsuperscript{14}

Customary communal fishing was thus seen by some as not only a threat to profitable fishery operations; insofar as it involved a congregation of a large group of discontented peasants, it was also seen as a “danger to the ruling power.”

When \textit{Mudboo Mundle} was heard by the High Court, Justices Mitter and Grant dismissed the charge of unlawful assembly because they found the defendants to be acting independently, rather than in any kind of concerted effort to cause harm. Similarly, the question of theft was dodged because no fish had actually been moved out of the beel. \textit{Mudboo Mundle}, the first Meherpur case, thus avoided many of the substantive questions at issue. The Court found no evidence of fish actually being taken from the beel and thus avoided the question of whether the alleged wrongdoing—the taking of fish from this beel—would have, in fact, been the criminal offense of theft, as per the law, had it been fully undertaken. Thus the Assistant Magistrate’s decision was overturned without a legal rule regarding fishing rights being necessitated or formulated. However, this case remains significant in that it shows the Court’s reluctance to impose the criminal law on the issue of fishery rights. The justices of the Calcutta High Court, unlike the Governor of Bombay, were clearly not of the opinion that risk of discord was

\textsuperscript{14} Quoted in ibid, p. 122.
enough to sanction an enhanced application of the criminal law. This would be made clearer in the second Meherpur case.

The Second Meherpur Case

One year after Mudboo Mundle, the Court began to formulate a rule regarding fishing rights in Bengal in the second Meherpur case. The later case, which came to be known as the Meherpore case of 1887, is the better known of the two\textsuperscript{15} and it provides a particularly good illustration of the confusion surrounding fishing rights at the time. Chief Justice Sir William Comer Petheram, a member of the Middle Temple Bar in England and an experienced judge in India,\textsuperscript{16} in delivering the opinion of the Calcutta High Court, gave an account of the events of the case:

\begin{quote}
It appears that, on a particular day in the year, it is the practice of the inhabitants of the neighboring towns and villages to go to this bheel [beel] and catch what fish they can, and for doing that these sixty-eight persons have been convicted of stealing fish and punished in an extraordinary manner. A large number of them were whipped there and then, or at any rate a few hours after, and a large number of them have been sentenced to two months’ rigorous imprisonment.\textsuperscript{17}
\end{quote}

Petheram’s shock at some of what transpired is apparent. However, the description of the events of the case offered by Petheram fits nicely into the historical framework established in the previous two chapters.

The peasants, as in Mudboo Mundle but in larger numbers, had descended on the beel for customary communal fishing during what were likely the Bengali New Year festivities, which marked the beginning of the wetter months of the year. This practice had been built around the seasonal customary fishing regime and had existed for centuries. However, with the arrival of the British, establishment of a new class of zamindars, and the breakdown in peasant-landowner relations, customary fishing became an area of contention. The beel in question lay in zamindari lands, the right to use the water body as a fishery, known as the jalkar rights, had been leased out to a tenant for Rs. 500 a year. This tenant had been the one to call in the local authorities, in an attempt to prevent the depletion of what he saw as his fish stock, and these authorities commenced the criminal proceedings, apparently on the spot. Interestingly, the conflict in this case is not between zamindar and rayat, but entirely between rayats. The lessee of the jalkar rights, the complainant in this case, was ultimately a kind of tenant cultivator who had to pay rent—Rs. 500 annually—to the zamindar. He was, therefore, likely a wealthy farmer—a rayat who had benefited from the growth of markets and the various other changes of the 1800s. This follows Nakazato’s observation that an increasing stratification within the class of rayats was a fundamental social change in nineteenth century Bengal.18

However, the zamindar-rayat conflict still loomed over the events of the Meherpur cases. If the tenant fishery manager suffered a loss because of the effects of customary fishing, he could not pay his Rs. 500 annual rent to the zamindar. Thus the zamindar ultimately felt the effects of the same loss. So the tenant fish farmer, through an alignment of incentives with the zamindar, became incorporated into the broader

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Zamindar-rayat conflict on customary fishing on the side of the zamindar. And, of course, the violence and coercive force used in this case, relying heavily on the summarily applied colonial criminal law by British authorities, was typical of the zamindar-rayat conflicts throughout the nineteenth century, as detailed in the previous chapter.

Petheram and Justice Chunder Madhub Ghose, considering an appeal of the District Magistrate’s original decision, relied on the ferus naturae theory of wild animals as unowned property in deciding whether theft of fish had been committed. Since the fish were not in an enclosed body of water and were free to move in and out of the beel and through the broader Jalangi River system at their wish, they were no one’s property until they were caught or otherwise entrapped. Therefore, the peasants could not have stolen the fish from the fish farmer because the fish, as ferus naturae, were not the farmer’s property to begin with. However, important questions regarding how ownership over fish, as ferus naturae, could in fact be asserted remained. That is, how do fish become someone’s property? Is it necessary to kill them and remove them from water to acquire them to the full exclusion of others? Is it enough that the fish are contained in a body of water enclosed completely within one person’s land with no connection to public rivers? When can we say that someone has caught the fish?19 The Court, in the Meherpore case of 1887, did not answer any of these questions except to say that in the case under consideration, which happened to occur at a time when the beel in question was connected to the Jalangi River, the fish were ferus naturae. As such, they could not

19 How property can be acquired in wild animals over land is famously considered in another part of the common law world in Pierson v. Post (1805), 3 Cai. R. 175; 1805 N.Y. LEXIS 311. In that case, it was decided that a hunter’s prolonged pursuit of a fox was not enough for him to establish property over that fox; rather, ownership was granted to the one who finally killed and seized the animal. Post had been in pursuit of a fox when Pierson came across the animal and, despite knowing that Post was in pursuit, killed it and carried it away for himself. Post sued, arguing the fox belonged to him by virtue of his pursuit, but the New York Supreme Court ultimately sided with Pierson.
reasonably be said to belong to someone just because they happened to be passing through a stretch of water over which that person had *jalkar* rights.

The charge of theft was thus dropped primarily on the grounds of the *ferae naturae* theory. However, to this Justice Ghose also added that since the fishermen were relying on a customary right to fish, they could not be said to have any dishonest intent, which was a requirement for a conviction of theft under the Indian Penal Code.20 The additional charge of criminal trespass was also quashed because the peasants showed no intent to “intimidate, insult, or annoy any person in possession of the property.”21 Rather, Justice Petheram notes that their intent in trespassing must be limited to fishing, which they thought they had a customary right to do. Ultimately, by the Calcutta High Court, the only offense of which the peasants could be considered to be guilty was trespass under the civil law.22

So, the Calcutta High Court began to consider some of the more substantive issues concerning fishing rights in the Meherpore case of 1887. Notably, the Court held that despite the existence of fisheries, charges of criminal larceny could not be sustained against the peasants because fish were *ferae naturae* and therefore not owned by the occupant of a *jalkar* right just because they happened to be passing through his section of water. Indeed, this follows the state of law in England, where fishing in private fisheries was not grounds for criminal larceny.23 In the case of *Rex v. Carradice*24 a number of individuals had been charged with theft for fishing from the River Kent in an area

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21 A requirement for conviction under criminal trespass as defined by the Indian Penal Code, Section 441, http://indiankanoon.org/doc/1569253.
23 Ibid, p. 822.
24 R. & R.C.C. 205.
where it ran through an enclosed park. In that case, the English courts cleared them of
the criminal charges, holding that taking fish from a river that flowed through a fenced-
in park did not constitute theft because the fish themselves were not “bred, kept, or
preserved” within that section of river.\(^{25}\)

This does not, of course, preclude the possibility that a fishery owner, where a
public right did not apply, could feasibly claim a tort in a case of public fishing on his
fishery. The famous case of *Keeble v. Hickeringill*\(^{26}\) is perhaps relevant to the question of
how restitution might be sought by fishery owners. Keeble employed duck decoys and
nets in his pond to capture and sell ducks for his livelihood, but his neighbor Hickeringill
discharged firearms on his land purely to frighten the ducks away and interfere with
Keeble’s traps. In *Keeble*, the action of trespass was sustained and Hickeringill was held
liable for disrupting Keeble’s right to use his land for profit. Notably, Keeble did not
attempt to recover damages for the loss of the ducks, which were *ferae naturae* and thus
unlikely to be considered Keeble’s property unless they were actually physically
contained in some way. A possible way to recover damages from public fishing,
following *Keeble*, might have been by claiming an erosion of the right to operate the
fishery for profit. However, this kind of claim might have been difficult to make in rivers
with plentiful fish and when independent fishing by individuals was unlikely to diminish
the value of the fishery. Moreover, in England at least, a right to fishery use would not
have superseded the public right to fish where the public right existed.

\(^{25}\) Harrison, S.B., *An Analytical Digest of All the Reported Cases, Determined in the House of
Lords, The Several Courts of Common Law, In Banc and at Nisi Prius; and the Court of Bankruptcy:
and Also the Crown Cases Reserved, from Mich. Term, 1756, to Mich. Term 1834* Together with a

Throughout the opinion in the second Meherpur case, the Court showed a marked reluctance to engage the criminal law in the dispute over fishing rights. The view of the Court seemed to be that the issue of fishing rights was basically a civil dispute that needed to be decided primarily through bargaining and negotiations between those involved, perhaps at times involving civil litigation. Under one economic account, what differentiates the criminal and civil law is that the criminal law deals with instances where not just an individual, but society as a whole is victimized by an act.\textsuperscript{27} As one theorist puts it, “criminal litigation [is] a kind of class action organized by the state.”\textsuperscript{28} No societal harms that would justify the application of criminal law could reasonably be deduced from the continued presence of centuries old customary fishing. Therefore, to summarily put the criminal law behind the zamindar in this case would be to have the state take sides in what amounted to a class conflict.

If only the civil law were to be applied, the outcome of the case would be different in several important ways. Of course, whippings and imprisonments would be out of the question. Furthermore, the civil trial might take longer than the summary criminal trials that occurred in both the Meherpur cases. Given the costs of prolonged civil litigation and the meager amounts of money at issue, the litigants would have good reason to resolve their dispute out of court. This could be done using informal arbitration procedures that had always existed in rural society.\textsuperscript{29} But such customary forms of justice would likely have recognized the long-held norm of communal fishing and would have been unlikely to rule so heavily in favor of the fish farmer. Moreover,

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the Anglo-Indian civil law itself, while based heavily on English civil law, gave some importance to local customs and both Hindu and Muslim law. Neither English civil law, nor law based on local custom or religion would have called for very severe penalties to be placed on the peasants. While the Meherpur cases shut the door for the use of criminal law in fishery matters during the monsoon months when fish were free to move throughout the extended river systems, it left several questions unanswered. For one, could a conviction of criminal larceny be held when fish were taken from *beels* and *jheels* while they were disconnected from the public rivers during the dry months and thus fell entirely within *zamindari* land? In other words, was there room for a legal formalization of seasonal customary use? These questions are answered in the next group of cases, to which I now turn.

**Maya Ram Surma v. Nichala Katani and Others**

The next big development in the evolution of the legal rule regarding fishing rights came about through another pair of cases, both originating in the same district and both considered by the Calcutta High Court on the same day. The High Court considered both *Maya Ram Surma v. Nichala Katani* and *Bhagiram Dome v. Abar Dome* on January 24, 1888; both cases originated in the Sivasagar district of what is today the northeastern Indian state of Assam. The cases, therefore, did not arise out of what has been called “Bengal” throughout this essay, namely what is today Bangladesh and the Indian state of West Bengal. Nevertheless, in 1888 Assam was a part of the Bengal Presidency—the administrative province of Bengal as defined by colonial authorities—and fell under the

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30 (1888) I.L.R. 15 Cal. 402.
31 (1888) I.L.R. 15 Cal. 388.
appellate jurisdiction of the Calcutta High Court. Justice Chunder Madhub Ghose, who had helped decide the second Meherpur case, along with Justice J.F. Norris, an experienced barrister and judge who had been appointed to the honorific Queen’s Counsel (QC),\textsuperscript{32} presided over the two Assamese cases at issue. In deciding these cases, they used and expanded on the precedent of the two Meherpur cases and further developed a rule for fishing rights in Bengal, as well as throughout colonial India.

In both of these cases, the alleged offences, theft and trespass, took place on parts of public rivers that had been leased out by the government to individuals for use as fisheries. Consequently, perhaps the colonial interest was more proximately involved here as the Raj, rather than a local zamindar, had directly leased out the stretch of river in question. The events of Maya Ram Surma illustrate the growing conflict between the colonial judiciary and the administrative and executive institutions of colonial government in Bengal. The defendants in the case were accused of theft and criminal trespass after they had fished out of a tank that had been excavated by the complainant. Geography was, again, an important consideration; even though the tank was artificial and dug out by the complainant, the alleged offense occurred during monsoon flooding when the tank had been fully incorporated into the nearby river, which was itself connected to the broader Brahmaputra River system.\textsuperscript{33}

The case was at first tried by the Assistant Commissioner, a local agent of British authority acting as a magistrate. Importantly, the divisional commissioner post combined a revenue collection responsibility with criminal jurisdiction; the local divisional commissioner acted as magistrate, commanded police functions, and had summary

\textsuperscript{32} \textit{Routledge's Almanack for 1888}, London: George Routledge and Sons, 1887, p. 102.
jurisdiction in rent cases. In his capacity as a revenue officer, the divisional commissioners in Sivasagar would have been acutely aware of the money to be made from farming out sections of public rivers. Nevertheless, the Assistant Commissioner in this case at first dismissed the complaint, citing the Meherpore case of 1887. He noted in his decision:

Complainant did not cultivate the fish; they entered the tank in flood time. Therefore according to a High Court ruling...they are *ferae naturae* and no man’s property, and no offence (such as theft or trespass) has been committed...if complainant wishes, I will refer this case to High Court for orders.\(^{35}\)

However, the Assistant Commissioner, a Mr. P.G. Melitus, appears to have had significant doubts about his decision and reevaluated the case seemingly without any further appeals from the complainant.

Melitus eventually wrote to the Deputy Commissioner, his immediate superior:

The Meherpore case has not been, so far as I know, authoritatively reported, and I doubt if I was right in accepting mere newspaper reports and the statement of the law, which conflicts with previous rulings and practice...The matter is of such importance to Government and the public that I do not feel justified in allowing this complaint to remain struck off on my own authority. I request the favour of the definite instructions for future guidance. To D.C.

[Deputy Commissioner] for orders.\(^{36}\)

To this appeal for help, the Deputy Commissioner, a Mr. J. Knox-Wight, responded that he could not refer the matter to the High Court because High Court justices were not


\(^{36}\) Ibid.
legal advisors of the colonial authorities, and required a case to be brought before them judicially before they pronounced judgment. Mr. Knox-Wight, however, offered his own opinion:

You have dismissed the case under Section 203; I think you are wrong. The ruling you refer to is that of a division bench, and there are rulings in the opposite sense. Please take up the evidence and enquire into it. If you acquit on the evidence, or if you convict, the matter would be dealt with and referred to higher authority if necessary.  

Upon receiving this notice, Melitus recommenced the trial and, apparently influenced by Knox-Wight’s assertion that the Meherpore ruling was “of a division bench, and there were rulings in the opposite sense,” convicted the accused of criminal trespass and larceny.

In convicting the accused, the Assistant Commissioner relied on what he saw to be a contradiction between the High Court decision in the Meherpore case of 1887 and those in the Meherpur case of 1886 as well as an earlier case, The Empress v. Charu Nagia. He frames his ruling in Maya Ram Surma to be “in preference” of the rule established in the latter two cases over the second Meherpur case. The contradiction, for Melitus, arises from the fact that whereas the second Meherpur case held that taking fish from a fishery within which fish are feræ naturæ is not criminal larceny, the first Meherpore case, considering the same beel, held that criminal larceny was not committed because no fish was actually removed. He erroneously takes the decision in the first

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37 Ibid. Section 203 of the Indian Criminal Code establishes the procedure for dismissal of a complaint. See http://indiankanoon.org/doc/445276. A “division bench” of two judges, rather than a “full bench” of three or more judges, heard the Meherpore Case of 1887 (as well as the earlier Meherpur case). The judgment of a bench can only be overruled by the judgment of a larger bench.

38 (1877) I.L.R. 2 Cal. 355.
Meherpur case, Mudboo Mundle, to imply that if fish had actually been moved then theft would have been committed. Rather, the correct interpretation of that ruling, given in an earlier section above, is that theft could not possibly have been committed since fish were not actually removed—this says nothing about what would have been the case had fish been removed. Similarly, in Charu Nayiah, another case involving fishing in a public river, the Calcutta High Court held that criminal trespass had not been committed by the accused since he was on a public river, which was no one’s exclusive property even if they had a lease to operate fisheries. Melitus again construes this to imply that criminal trespass would have been committed had the fishing, say, occurred on a privately excavated tank adjacent to a public river rather than on the river itself. In choosing the rule supposedly set out in Charu Nayiah and Mudboo Mundle over the decision in the second Meherpur case, Melitus also asserts that his decision is more in keeping with the customary laws of the country. Of course, this assertion is contrary to everything that we have seen in the previous two chapters.

The case, on appeal, went from Melitus to the Deputy Commissioner, Knox-Wight, and on to the High Court. In forwarding the application to the High Court, Knox-Wight, who had earlier seemingly encouraged Melitus to convict, now curiously suggests:

The evidence, even if believed, does not establish the offence of theft or criminal trespass if the recent rulings in the Meherpore case be correctly reported…as the lower Court [Melitus] has based its decision on a wrong view of the law, the order should be reversed…[The matter is] of the greatest
importance to the public and to Government, and it is very necessary to have
the correctness of the present order either affirmed or denied.\textsuperscript{39}

So, Mr. Knox-Wight comes across as something of a sly character. He seems to have
induced Melitus’s decision to convict, but presents himself to the High Court as
relatively impartial to which outcome was reached, even being so bold as to suggest that
Melitus’s decision, which was largely influenced by Wight himself, was faulty. For Knox-
Wight, the game seems to have been to push for a change in the judicial rule concerning
fishing while avoiding the censure that would come from openly defying a High Court
ruling. He apparently did this by delegating the dirty work, as it were, to his underling,
Melitus.

Unfortunately for Knox-Wight, the High Court was firm in its disapproval of the
actions of both Knox-Wight and Melitus for their complete disregard of the Court’s
decision in the Meherpore case of 1887. Ghose and Norris cleared the accused of both
charges of theft and criminal trespass. The justices corrected Melitus’s misconceptions
regarding \textit{Charu Nayiab} and \textit{Mudboo Mundle} and pointed out that there was no
contradiction between the holdings in those two cases and that in the second Meherpore
case. In clearing the accused of theft, the Court also cited the precedents of Regina \textit{v. Revu
Pothadu},\textsuperscript{40} a case tried by the Madras High Court, as well as the aforementioned Rex \textit{v.
Carradice}.\textsuperscript{41} In \textit{Revu Pothadu} it was held that fish in an open irrigation tank were not in a
kind of possession that their taking constituted theft. Similarly, as we have seen, in
\textit{Carradice} it was held that the fish in an enclosed portion of the river Kent were \textit{ferae}

\textsuperscript{39} Cranenburgh, D.E., \textit{A Handbook of Criminal Cases Containing a Verbatim Reprint of All
Criminal Cases Reported in Vols. I. to XVI., Calcutta Series I.L.R., With a Complete Digest},
\textsuperscript{40} (1882) I.L.R. 5 Mad. 390.
\textsuperscript{41} R. \& R.C.C. 205.
naturae. In *Revu Pothadu*, the justices of the Madras High Court, making explicit what I suggest was an important message of their colleagues in Calcutta, noted that if removing these fish caused any harm, the remedy should be pursued through a civil action. The conviction of criminal trespassing in *Maya Ram Surma* was also overturned because, following the reasoning set out in the second Meherpur case, the accused had only entered the tank to fish, which was not a criminal offense given the state of inundation and the fact that the tank was not closed. As in the Meherpur case, there was no indication of intent to annoy, insult, or intimidate the owner of the tank.

Most interestingly, in *Maya Ram Surma*, the Court expanded on what it considered to constitute possession of fish. Specifically, the justices noted that they would have been happy to affirm the conviction of theft if the fish were in a state where they could be taken at the will of the owner. In this case, if the tank had been fully enclosed, as it was during the dry season, the fish would have been unable to come and go between the tank and the river and would have therefore no longer been *ferae naturae*. Consequently, the fish would have been in the possession of the owner of the tank and fishing out of this tank in the dry season would have constituted criminal larceny. This rule also seems applicable to the many *beels* and *jheels* throughout the Gangetic delta that became connected to river systems during the wet months but remained fully enclosed by land in the dry months. Fishing in these water bodies could not be considered larceny in the wetter months but might have been considered so in the dry season when the fish inside them were entirely trapped in the *beel*. An important question, however, remained unanswered. What would happen in the case that a fully enclosed *beel* had many adjacent owners? Could fishing in these *beels* be considered larceny, despite the fact that the fish,

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in being able to move between individuals’ property, were in some sense *ferae naturae*?

While we can speculate as to how the Court would have decided these cases, the Court never explicitly answered the interesting questions that could have been posed by such circumstances. Notably, however, in *Maya Ram Surma* the Court advanced a rule—albeit an as of yet imperfectly developed one—regarding property over fish that, as if by magic, mirrors the seasonal usage patterns under customary fishing. I say “as if by magic” because there was no explicit intent on the part of the justices to make this happen—indeed, many of them would likely have been ignorant of the intricacies of customary fishing.

*Bhagiram Dome v. Abar Dome and Another*

Our friend Melitus, the rent collector and lay jurist who was now seemingly on a crusade to overturn the High Court ruling in the Meherpore case, also tried the case of *Bhagiram Dome v. Abar Dome*. There appears to be some confusion regarding the naming of the case. Bhagiram Dome and Abar Dome were, in fact, the two accused in this case. Indeed, the Doms (or “Domes” as they are referred to in the case) were a highly marginalized group in Indian society and it seems very unlikely that one of them could have obtained a right to fishery operations. On this occasion, the two accused along with eleven others were fishing during the monsoon in the Bhogdoi River. The Bhogdoi is a tributary of the Brahmaputra, which in turn is one of the great rivers of Asia.

Unfortunately for them, the government had farmed out the stretch of river they were

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43 *N.b. Bhagiram Dome* was decided by the High Court on the same day as *Maya Ram Surma*, so Melitus would not have had access to the *Surma* decision when he made his ruling in *Bhagiram Dome*. 
fishing in as a fishery. The lessee complained, the Domes were apprehended by authorities, and charged with criminal trespass, theft, and unlawful assembly.

At the summary trial, Melitus convicted them of the above offenses along with those of mischief and criminal intimidation, with which they were not charged. Some of the accused were fined Rs. 10 while others were sentenced to two months rigorous imprisonment. Additionally, Melitus found them guilty of criminal misappropriation even though that charge was apparently not admissible in a summary trial and, therefore, Melitus could not convict on it. The practice of finding culpability for crimes not charged is undoubtedly problematic in itself because if the defendant does not know the extent of his charges, how can he or his counsel prepare a proper defense? The High Court in its judgment notes this but does not go so far as to explicitly censure Melitus for carrying out the trial in this way. All of this, however, makes sense in the context of the imperial regime; as the nodes of British authority spread out over the vast Indian topography, executive and judicial authority became increasingly combined in the same individuals. That is to say, while there were independent courts and police in the capital city of Calcutta, in the far-flung villages of Bengal, the entirety of British authority often centered on one man, who acted as revenue administrator, police, prosecutor, and judge all in one.

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46 Stokes notes that under Cornwallis’s vision at the time of Permanent Settlement, which favored checks and balances on government power, executive and judicial bodies were more completely separated. Additionally, executive power was based in collective and deliberative bodies rather than individuals. However, this framework was abandoned by 1831 for the system of individual divisional commissioners, who could more promptly carry out executive action and more effectively be held accountable. Stokes
The Deputy Commissioner, the same Mr. Knox-Wight, had apparently again expressed the belief that Melitus’s convictions were in error.\(^{47}\) Melitus, it seems, had grown bolder since \textit{Maya Ram Surma}, “the \textit{ferae naturae} theory does not apply to fish in this country,” he asserted, “the laws relating to real property in this country follow the old land laws of the country, which recognize fish in a fishery to be property of the owner of the fishery.”\(^{48}\) The Court was quick to correct him on this point, noting that it ran contrary to much precedent on the subject, both in England and in India. Indeed, Melitus’s account of “the old land laws of the country” is further discredited by our account of customary fishing, which is based on numerous reported observations of commons fishing coexisting with commercial fisheries in Bengal. Much of the Court’s reasoning in \textit{Bhagiram Dome} followed what has been described above in the two Meherpur cases as well as in \textit{Maya Ram Surma v. Nichala Katani}. Specifically, the courts reasoning in overturning the convictions of unlawful assembly, theft, and criminal trespass exactly followed the reasoning developed in the three cases described above. The justices again pointed out that there was no contradiction between the two Meherpore cases and insisted that fish in a navigable river during monsoon were \textit{ferae naturae} and not the property of a fishery owner unless and until they were trapped in some way.

In an attempt to overcome the ruling in the second Meherpur case, Melitus had argued that the fishery owner in this case could easily have captured the fish if he so desired. Melitus noted that typically, as the monsoon subsided, the fishery owners would


\(^{48}\) Ibid, p. 822.
trap the fish by putting up bamboo fencing in the riverbed, but he admitted, “in the present case the fencing had not been put up on the date of occurrence, as it does not pay to put it up till the end of the rains.”\(^{49}\) The Court, however, insisted that it was not enough to say that the fish could have been captured. But, the justices noted, if the fencing had actually been put up, and the fish had actually been so constrained, then the fish would have been in the possession of the \textit{jalkar} owner and, presumably, the conviction of criminal larceny could have been sustained. This ruling, therefore, reinforced \textit{Maya Ram Surma} and restated the same standard of possession of fish. Fish cease to be \textit{ferae naturae} when they are kept and enclosed in such a way that the owner can retrieve them at his will. When fish cease to be \textit{ferae naturae}, their taking constitutes criminal larceny.

Another interesting development in this case concerned the conviction of mischief. This conviction was based on a claim that by fishing in these waters, the accused had diminished the value of the complainant’s fishery. In responding to this charge, the Court held:

\begin{quote}
If it was a flowing river, and on the date of occurrence the flood was high, as it must have been in September, and if no fencing had been put up to shut up the fish in any manner, and they were free to escape in any direction they pleased, we fail to see how the act of the accused could possibly diminish the value of the fishery, or cause any change in the property.\(^{50}\)
\end{quote}

Indeed, this follows what I previously suggested in the context of a potential civil suit following the mold of \textit{Keeble v. Hickeringill}. Namely, one way of claiming damages against those who fish in a fishery would be to argue that their actions damaged the value of the

\(^{49}\) Ibid, p. 825.
\(^{50}\) Ibid, p. 826.
fishery and thus eroded the right to establish a fishery as per the governmental lease. However, this would be a difficult argument to make in the case of a large flowing river. In such a situation, it seems that a small group of fishermen could hardly impact the fishery’s catch. Moreover, the impact is the same whether they fish on the fishery or just outside of it in public waters.

_Bhagiram Dome_ further enshrined the rule developed in the Meherpur cases and _Maya Ram Surma_. It maintained the _ferae naturae_ theory of fish in the riparian system, and applied a rule for when they could be considered someone’s property and, consequently, when their taking became criminal larceny. This rule, as explicated in the previous section, mirrored the seasonal patterns of customary fishing that had existed since pre-colonial times. In concluding their judgment, the justices of the High Court noted, “the Assistant Commissioner has displayed a wanton disregard of the authority of the rulings of this Court, which cannot but be gravely censured.”

In this case, the Assistant Commissioner, Mr. Melitus, went farther than he had in _Charu Nayiah_ by calling into question the applicability of the theory of _ferae naturae_ to India. The Court, considering both of the Melitus cases together, resoundingly rejected the liberal application of the criminal law in the case of fishing rights, even when the government had directly leased out the _jalkar_ rights at issue to fishery operators. The Court’s rejection of the colonial practice of arbitrarily bringing the criminal law behind policy initiatives was one of the most important outcomes of the fish-related High Court cases of the 1880s.

The Court seemed to be paving the way for a new civil society, based on deliberation and consensual negotiation, and backed by legal principles rather than the police force of the state and class motivated interests. Moreover, they were doing this in

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51 Ibid, p. 827.
an institutional framework where, at the ground level, legislative, judicial, and executive authorities were often coextensive and organized so as to advance profit and British power above all else. In the broader evolution of fishing rights in Bengal, as I further show below, the rulings by the Calcutta High Court moved the question of fishing norms once more towards the realm of consensual negotiation within communities, and away from the coercive influences and conflict that had gripped many Bengali villages.

An Economic Analysis

Exchange and Pareto Efficiency in the Case of Fishing Rights

As detailed in the previous chapter, the conflict over fishing was part of the broader societal change that was taking place in Bengal at the time. One important role for the law, in this case, was in providing the guidelines for channeling this broad change and adapting to it as it applied to fishing. In other words, it is clear that due to increased urbanization, Sanskritization processes, and the development of markets, fisheries were able to do more business. Urban dwellers, of whom there were more and more every day, bought more and more fish, and indeed relied on commercial fisheries to supply them with fish. Fisheries were thus becoming more highly valued at the societal level, and this social valuation, through the price mechanism, was reflected in the increasing profitability of the fishery business. However, a problem emerged when commercial fisheries came into conflict with customary fishing—now the question became, were fisheries more socially valuable than customary fishing?

One relatively straightforward way in which this kind of question can be addressed is through the criterion of exchange. If fisheries are indeed more highly valued than customary fishing, fishery operators will make enough profit that they can, under
ideal conditions, purchase the right of customary fishers. In this case, the exchange is called Pareto improving since both parties are made better off as a result of it. The customary fisher has his damages from losing his right to customary fishing in the monsoon more than covered by the exchange, and the fishery operator retains enough profit that he is better off than in the case of continued customary fishing. In the case that there are no longer any possible exchanges through which all parties are made better off, we say that Pareto efficiency has been reached and aggregate value has been maximized. Importantly, the set of Pareto efficient outcomes available through exchange are contingent on the initial endowment of goods held by each trader. In other words, the allocations that can be reached through trade are dependent on the allocations that the parties start out with. Therefore, Pareto efficiency is not sensitive to distributional concerns that may be present.

To illustrate this, consider a simple example from apple-pear land, where Adam and Carl trade a fixed number of apples and pears between them. Adam likes apples more than pears, Carl likes pears more than apples, possessing either fruit always increases utility, and the two fruits are the only source of utility for them. So, if there are 20 apples and 20 pears in apple-pear land, Carl and Adam should ideally have similar number of fruits—perhaps Carl will trade to have some more pears than apples and Adam vice versa. But in apple-pear land, neither has any control on how many apples and pears each starts out with—let us say, for now, that this initial endowment is assigned at random. The most obvious case that shows the incompatibility between the

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52 This requires that peasants and jalkar owners can easily transact with one another under a common set of rules such that this kind of bona fide consensual exchange can take place.

53 Strictly speaking, an exchange is Pareto improving if at least one party is made better off by it while no party is made worse off. The concept is named after the Italian economist Vilfredo Pareto.
distributional consideration based on preferences and the demands of Pareto efficiency is the extreme case where Adam starts out with all 20 apples and 20 pears. In this case, Adam cannot trade anything with Carl—he can only give away apples or pears. Under our assumptions, any such “giving away” results in Adam being made worse off than his initial endowment, while Carl is made better off. This, of course, violates the criterion of Pareto efficient exchange, which says that no party can be made worse off. Therefore, since there are no better allocations accessible through trade, the allocation of 20 apples to 20 pears to Adam and nothing to Carl is a Pareto efficient allocation.

Importantly, it is Pareto efficient despite being an extreme violation of the distributional consideration based on Adam and Carl’s respective fruit preferences. In a more equitable case, where Adam and Carl both have 10 apples and 10 pears, Adam might still want to trade away some of his pears for more apples and Carl might, correspondingly, want to trade some apples for pears. In this case, opportunities for Pareto improving exchange abound and the two can, through trade alone, reach a distribution of fruits that each is happier with. Thus from more equal initial distributions, Adam and Carl will trade towards outcomes that are both Pareto efficient and relatively equal. From lopsided initial endowments, they will trade towards outcomes that are Pareto efficient but still lopsided—though both will achieve more utility after the trade than before it, one will still be rich and the other poor relative to one another. Thus, given an unequal initial distribution and a disinclination of the rich to give goods away to the poor, the only way to approach equal distributions is by violating Pareto’s criterion and forcing, in this case, Adam to give away some of his fruits for the sake of the
distributional concern.\textsuperscript{54} Pareto efficiency and distributional equity are thus not equivalent—given one’s distributional preference, an allocation may be efficient and fair, or efficient and unfair.

The British economist Ronald Coase further generalized Pareto’s theory by applying it to externalities.\textsuperscript{55} Externalities are costs and benefits felt by individuals who are not voluntarily transacting for them. Thus in the case of negative externalities, individuals have no opportunity to be compensated for the costs that they bear. The classic example is pollution; while a local community may not have a say in a factory being set up in their neighborhood, they must always endure the pollution from the factory. Coase’s observation, the famous Coase Theorem, was that, in this case, if community members and factory operators can easily bargain, these external effects will tend to be internalized into market exchanges, resulting in a Pareto efficient allocation. So, if 100 community members suffer an equivalent of $10 each per year from the pollution and the factory only makes $100 per year, the community, under ideal conditions, will be able to buy out the factory.\textsuperscript{56} Of course, there may be an array of obstacles preventing the community members from effectively transacting with the factory owners. These obstacles are called transactions costs and are central to Coasean analysis. For example, if high transactions costs keep the above deal from ever being consummated and the law’s objective is efficient allocation alone, Coase would advocate assigning the right to build a factory to the community members, who have been

\textsuperscript{54} Of course, we only have to force him because we are operating under the assumption that he only derives utility from apples and pears. On the other hand, if he derived utility—perhaps a moral benefit—from simply living in a more equal world, we may be able to convince him to part with some of his fruits for the sake of that objective, or he may even do so of his own accord.


\textsuperscript{56} Since the community together suffers $1000 while the factory only makes $100.
identified as the *highest valuing owners* (HVOs) of the right, so as to realize an efficient outcome without the need for any costly transaction at all. While our analysis of Bengali fish is not primarily an externalities problem, the Coasean framework remains highly relevant since it focuses on environments where property rights, rather than simple goods, are being exchanged.

Given all of this, we can consider how the idea of Pareto efficiency might play out over fishing rights in Bengal. Let us say that a *jalkar* owner and a fisherman can contract to exchange the customary right to fish in *beels* during the monsoons for a monetary payment. There are two states of the world, distinguished by differing ownership of the right to fish: in case (1) the fisher holds the right to fish during the monsoon, so that customary fishing and fisheries operate together in the monsoon; and in case (2) the right to fish lies with the *jalkar* owner, who uses it to bar the customary fishers, so that only his commercial fisheries operate. In (1) the *jalkar* owner makes Rs. 5 and the fisherman derives the equivalent of Rs. 5 of pleasure, while in (2) the *jalkar* owner makes Rs. 20 and the fisherman faces a utility equivalent to Rs. -2. The *jalkar* owner, deriving an additional Rs. 15 versus the fisherman’s loss of Rs. 7, is the HVO of the right here. In this case, if we start out at (1), where the *jalkar* owner must win the fisher’s consent not to fish by purchasing the fishing right from him, the *jalkar* owner, seeing that he can make Rs. 15 more in (2) than in (1) and that the fisherman only loses Rs. 7 in moving from (1) to (2), can pay the fisherman some amount of the difference to surrender his right to customary fishing. So, for example, starting from (1), if the *jalkar* owner pays the fisherman Rs. 9 to get to (2), he now makes Rs. 11 at (2) while the fisherman makes Rs. 7 at (2). Both are thus made better off at (2) than at (1). These kinds of exchanges can work in this way because the aggregate value of (1) is only
equivalent to Rs. 10, while the value of (2) is Rs. 18; the difference in aggregate value can
be distributed in such a way as to incentivize both parties towards a consensual move
from (1) to (2). Notably, the bargaining process itself reveals the identity of the HVO
and the relative valuations of the fishing right.

Distributional considerations are relevant in this case as well. The effect of the
initial allocation is just as important as it was in apple-pear land. Above we have
considered the case where the initial allocation is defined by (1). This requires that
fishery operators have to compensate customary fishermen to move from (1) to (2).
However, in the case that the initial allocation is defined by (2)—say due to a ruling by
the courts or legislatures—the jalakar owner is under no obligation to compensate the
customary fishermen for not fishing because he starts out with the full fishing rights and
is entitled simply to exclude the customary fishers from fishing. Notably, the allocation is
still efficient in either case since the right to fish ends up with the jalakar owner, the
HVO. Either it is transferred by exchange from the lower valuing fisher to the higher
valuing jalakar owner, or it is held by the jalakar owner to begin with. In both cases, the
aggregate value is maximized at Rs. 18. However, when the right is granted to the
fisherman, he receives a larger portion of this maximized value since he has to be
compensated in order for that value to be realized. Alternatively, when the right is
granted to the jalakar owner, he does not need to compensate the fisherman and can thus
retain the entirety of the surplus created by the efficiency of the allocation. While Coase
says that the right will end up in the hands of the HVO regardless of its original
allocation (in the absence of transactions costs), there are clearly important differences in
how the added value from efficient allocation is distributed.
“When an economist is comparing alternative social arrangements,” Coase argues, “the proper procedure is to compare the total social product yielded by these different arrangements.” Like most economists, Coase is clear that efficiency considerations should be primary in deciding property right allocations. But while efficiency is clearly an important consideration, distributional effects may remain important. They might be particularly important in the environment of colonial Bengal, where there were no mechanisms in place for the transfer of wealth through taxes or other governmental action. In this situation, the added social wealth from efficient allocation is “social” in name alone; it is really just added zamindari wealth. The benefits accrue exclusively to rich jalkar owners and urban fish consumers, while the costs are borne entirely by the poor peasants who lose customary fishing and do not benefit from expanded fish markets. Transactions costs, as I detail above, would have been low. Therefore, efficiency would have been realized regardless of whom the Court granted the fishing right to initially. Given this, there would be good reason for the Court to grant the right to the poor fishermen on distributional grounds alone. In the environment of colonial Bengal, only judicial action in determining initial property right allocations could have ensured that customary fishers would receive some share of the added value from increased fishery use.

Transactions Costs and Pareto Efficiency in Relational Systems

Putting the merits of distributional considerations aside for now and assuming that we indeed start at (1), there are still clearly important obstacles to the consummation of Pareto improving exchange that will move the allocation from (1) to (2). All of these obstacles are, broadly, transactions costs—that is, they are inherent costs to organizing and executing a transaction in this environment. For one, the jalkar owner needs to know how much more money he will make in (2). But this assumption is perhaps the least restrictive—it simply consists in asking the question, how much more money do you think you can make if you can sell this many more of your product? And this kind of question is integral to the operation of any business.

However, the jalkar owner also needs to know how much he will have to pay the fisherman to buy or somehow circumscribe his right to customary fishing, and this may be more difficult to gauge. Since the only true source of this information is the fisherman, the jalkar owner will have to engage the fisherman in good faith bargaining to reveal the range of prices at which he is willing to sell. Unlike the ideal case described in the above example, where the jalkar owner is omniscient, rampant informational asymmetries may exist in the real world. Importantly, the bargaining process itself offers a solution to some of these informational asymmetries. The picture that emerges of how a Pareto improving exchange may actually take place in this case is far more colorful than one suggesting a simple one-time exchange of money for rights. Problems of asymmetric information would have to be overcome and trust between contracting parties would have to be established. Furthermore, since the exchange would have to be made between a number of people to be effective and not just two individuals, negotiations would likely
be complex and might involve exchanges of rights and goods that go beyond fishing and money.

All of these challenges, daunting as they are, are surmountable, and for this reason the Coasean analysis remains relevant for Bengal. Moreover we can, as I have begun to do above, point to specific institutions that facilitate the Pareto improving outcome. As chapter one and two illustrate, problems of asymmetric information, for one, can be effectively solved and trust can build between contractors even in the absence of external contract enforcement or thick Hayekian markets. Indeed, as chapter one suggests, this is not simply a fanciful logical possibility; precisely these problems, albeit in slightly different contexts, have historically been overcome in these very Bengali communities. Moreover, systems of relational contracting, in the flexibility that they afford and their long-term scope, already minimize transactions costs. If Adam and Carl—perhaps zamindar and rayat—are previously involved in various exchanges with one another and have a trust and understanding that goes back generations, it will not cost them much to initiate another kind of transaction between them. In other words, the existence of a relational socio-economic order may be highly relevant to the management of potential transactions costs.

The promise of Pareto optimality is that individuals can be made mutually better off through purely consensual exchange. This concept is typically framed in terms of a “frictionless” exchange, devoid of any social context, between individuals who might as well be strangers. However, as I suggest above, the principle of mutually beneficial exchange is highly compatible with situations where community-enhancing relational contracts are in place and the individuals involved are more than mere abstractions to one another. Indeed, in such a context, the Pareto improving exchange has a value not
just insofar as it is mutually beneficial to the individuals involved, it is also valuable
insofar as it has a certain community-enhancing influence in itself. This is because such
an exchange in itself facilitates future exchanges that follow the same principle. By each
individually being made better off through repeated exchange, they increasingly come to
realize that they are better off together. That is, such exchanges both immediately
increase aggregate value as well as make individuals realize that they are better off
continuing to contract rather than going their separate ways. Therefore, despite the fact
that the concept of Pareto efficiency is typically not presented in terms of relational
contracting, an analysis based on the possibility of Pareto improving exchanges perhaps
has a special significance in the context of relational systems. I further develop these
aspects in the concluding section of this chapter where some potential consequences of
transacting problems are discussed in detail.

Property Rules and Liability Rules along the Ganges: One View of the Mahal

With this understanding of Pareto efficiency and Coasean analysis in place, I now turn to
an economic analysis of the rule developed by the High Court of Calcutta. How good
was this rule at facilitating a consensual realignment of fishing rights based on mutually
beneficial exchanges? A useful framework for analyzing the rule put forth by the Calcutta
High Court is due to American legal theorists Guido Calabresi and Douglas Melamed.58
By Calabresi and Melamed, a legal property rule protects an entitlement by requiring that
transfer of the entitlement be made only through voluntary exchange. A liability rule, on

58 Calabresi, Guido and Douglas A. Melamed, “Property Rules, Liability Rules, and
1089-1128.
the other hand, allows an entitlement to be taken or destroyed if the taker is willing to pay an objectively determined value for it.\(^{59}\)

So, as an illustrative example, under the High Court’s rulings, fish in an enclosed tank were protected by a property rule; these fish were not *ferae naturae* and could only be claimed through engaging the *jalkar* owner in voluntary exchange.\(^{60}\) On the other hand, the Court suggested that fish in an unenclosed water body might be protected by a liability rule. While these fish were not considered the *jalkar* owner’s property and their taking was not strictly prohibited, liability rules might still have been at play insofar as their taking infringed on the *jalkar* owner’s right to operate a fishery or enjoy his land—in this case, some set damages would have to have been paid to the *jalkar* owner for such an infringement.

In making a property rule applicable in the case of fish in an enclosed water body, the High Court reinforced the norms of seasonal customary fishing. A property right was assigned to the fish in a *zamindar’s beel* or tank when these water bodies were completely enclosed. This, of course, happened during the dry months during which customary fishing by peasants used to be off limits. Therefore, in assigning this property rule, the Court, whether it had intended to or not, effectively applied external enforcement to the old implicit contract of seasonal customary fishing. Any opportunistic *rayat* could now face the full force of the colonial penal system if he was

\[^{59}\text{Ibid, p. 1092.}\]
\[^{60}\text{If fish are removed without consent in this case, the perpetrator is a thief. Once he is a thief he is subject to a criminal punishment, which, as Adelstein points out, is ultimately a liability rule. For our purposes, the property rule protecting fish in an enclosed tank is distinguished from the liability rules protecting fisheries in general by the fact that the former warrants prosecution by the state under the criminal law while the latter, as formulated by the High Court, only allows for damages to be claimed in civil court. The liability prices in the first case will clearly be much higher than in the second. See Adelstein, Richard, “Victims as Cost Bearers,” *Buffalo Criminal Law Review*, 3, 1999, pp. 170-173.}\]
caught overstepping the bounds of customary fishing. The property rule, because it
applied only to enclosed water bodies, did not apply during the monsoon months.
However, the Court rejected the application of criminal liability to this situation and
suggested instead that only civil liability rules, tort suits for trespass or for damaging the
fishery, could theoretically be applicable during the monsoon months.

There is more to the application of such a liability rule than meets the eye. While
the liability rule was framed as protecting jalkar owners, the practical reality resembled
more a liability rule protecting customary fishermen. For one, the civil courts worked
slowly and civil suits cost money. Furthermore, the offenders were often too poor to
offer any substantial money for restitution; as the British Indian Association, a group
promoting zamindari interests, complained, “the people likely to commit such violations
belong to the poorest classes, and it would be mere waste of money to sue them in the
civil court.”61 For these reasons, the zamindars were seemingly unable to bring suit
effectively against customary fisherman. The poverty of the fishermen made it
impossible in practice for the zamindars to use the ordinary mechanisms of realizing the
liability rule protection granted to them by the law—the only judicially sanctioned way
that would have been available to them to remove customary fishing was to “bribe” the
fishers not to fish. In this way, the effect of the law’s ostensible placement of the
relevant entitlement in the zamindar was reversed by the rayats’ poverty; the eventual
outcome resembled one that would arise if a liability rule were applied to protect the
customary fishermen rather than the jalkar owners. In other words, the ruling put the
onus on the zamindar to compensate the rayat for any moves away from the long-held
customary fishing norms towards more fishery use and less customary fishing. This

61 “Statement of the Course of Legislation,” Supplement to the Calcutta Gazette, April 10,
1889, p. 657.
peculiar outcome, the consequence of the rayats’ inability to pay the tort damages implied by the ostensive entitlement, points to a possible underlying distributional problem. While the rayats, by all indications, valued customary fishing very much, they were perhaps simply too poor to represent this value in monetary terms.62

This state of affairs would have tremendously displeased the zamindars, who had become used to almost unfettered authority over their tenants in the years since Permanent Settlement. The rule, however, made a lot of sense from an economic standpoint. For one, it recognized the pattern of seasonal fishing by explicitly protecting fishery use in the dry season and effectively but informally protecting customary use in the monsoon. Perhaps recognizing the ways in which the winds of economic change were blowing, the Court created a situation where significant bargaining could take place over monsoon use—that is, fishery use could consensually expand into what had previously been reserved for customary use. Moreover, by sanctioning a theoretical, albeit practically toothless, liability rule protecting fishery owners during the wet months, the Court might have put pressure on customary fishers to engage in negotiations with jalkar owners and not hold on to their right for longer and longer periods of time in the hope of receiving higher payoffs well beyond their own honest valuations. The High Court’s rule, in facilitating negotiations away from the long-held seasonal patterns, allowed for a consensual bargaining process that could have revealed the true social valuations of fishery vs. customary use over time. That is, it enabled a mutually voluntary re-bargaining of the fish order towards the changing demands of efficiency.

62 I discuss the distributional issues in greater detail in the next section.
Distributional Considerations

Since the criterion of economic efficiency is based on exchange, only exchangeable values are considered relevant. That is, the fact that the rayats are poor is no more relevant to Pareto efficiency than the fact that Adam has all the fruits and Carl none. In both cases, a Pareto efficient outcome will be reached since such an outcome only depends on the possibilities for consensual exchange. For this reason, desires that are not backed by money or, more generally, exchange value, are simply not included in efficiency calculations. In nineteenth century Bengal however, the goal of the Court might not have been to simply reach the Pareto efficient outcome, but to reach efficiency and also actually facilitate more voluntary and mutually beneficial exchange in the future.

As noted in a previous section, such exchange can, in itself, be community enhancing. Such exchange, therefore, could have been a way forward from the widespread conflict and disarray of nineteenth century agrarian Bengal. If the rayats are destitute, clearly the possibilities for exchange are severely limited. In such a scenario, the concept of allocative efficiency cannot be the only, or even the principal goal of policy, since the rayats’ desires, which are clearly valuable in some sense, are being excluded from mutually beneficial processes of exchange. The Court’s rule, in effectively granting a liability protection to the customary fishermen, helped facilitate more exchange. In nineteenth century Bengal, this could well have helped diffuse conflict and rebuild communities.

As Calabresi and Melamed point out, another important consideration in assigning property and liability rules stems from the fact that courts might not know a
priori who the highest valuing owner of an entitlement is. Therefore, courts may assign rules that are, in practice, good at revealing the relative valuations of the entitlement. Indeed, this kind of uncertainty existed in nineteenth century Bengal, where the demand for commercially produced fish was growing but customary fishing also remained highly cherished and culturally significant. While we have been constructing Coasean examples under the assumption that the jal kar owner was the HVO of the customary fishing right, we do not, in the absence of exchange, know who the HVO really is. The Calcutta High Court would certainly not have known whether the true HVO was the jal kar owner or the customary fishermen.

With all of this in mind, there is an oddity that could potentially develop given the rayats’ poverty. The following thought experiment might help illustrate it. Say Petheram, Ghose, Norris and company decide to give the full fishing rights to jal kar owners. That is, they decide that unauthorized fishing from a fishery, regardless of season or level of inundation, is criminal larceny. Some time passes and, as expected, the rayats are too poor to negotiate for their customary fishing rights and the jal kar owner maintains full possession of the right, valuing it at Rs. 20 per year. Now, the High Court justices come across a time machine one fine day. Curious of what would have happened had they decided otherwise in the fisheries matter, they go back to 1788 and choose to give the customary fishing rights to the rayats this time around. Now we find that the jal kar owners, calculating the value to be gained by expanded fishery use perfectly (Rs. 20 per year) and negotiating in good faith, offer to buy the customary fishing right from the rayats. But it turns out that the rayats, also negotiating in good faith, are unwilling to sell away customary fishing at these prices. What do we make of this situation?

Clearly both states of the world are Pareto efficient since voluntary exchange is impossible in both. But who can we say is the HVO? The rayats seem to have a stronger case. When distributional distortions are not an impediment to exchange and both parties can actually voluntarily initiate exchange, the rayats choose to hold on to customary fishing rather than to sell it off. This suggests that, all things considered, the rayats are perhaps the HVOs in a more robust sense than the jalkar owners. To be sure, in the case that the fishing rights are given to jalkar owners they are, in fact, the HVOs because the rayats cannot represent their valuation in terms of entitlements for exchange. However, when the fishing rights are granted to customary fishermen, fishery operators, who can adequately express their valuations in terms of exchange, cannot buy it off of them. Consequently, in this case, the rayats are the HVOs.

The use of the Coasean and Paretian language is tricky here because we are attempting to conduct comparisons that are not typically conducted over the course of a Coasean analysis, in which distributional considerations of this sort are ignored. The main point, however, is that there would have been reason to prefer granting the right to customary fishers given (1) the judges’ imperfect information about who the HVOs in fact were and (2) the endemic distributional distortions. Granting the right to the rayats would have given them something to bargain with. It would have corrected for their poverty and allowed their valuations to enter into the system of exchange. Consequently, the system of exchange itself would have been made a more robust optimizer of social valuation. This line of argument, based more on distributional considerations rather than efficiency per se, adds further support to the Court’s decision to grant the fishing rights to customary fisherman. “In devising and choosing between social arrangements,” Coase
notes, “we should have regard for the total effect.” The kinds of distributional considerations discussed above, in Bengal at least, were an important part of the “total effect” of the legal rule and would have been on the minds of the High Court justices.

Importantly, in this case the distributional consideration of correcting for the rayats’ poverty has a certain complementarity with a general efficiency consideration. Namely, by correcting for the rayats’ poverty and allowing for more voluntary exchange, the Court made efficiency a more meaningful criterion for evaluating the social impact of a property right allocation. Calabresi and Melamed point out that an important reason on which to base the initial placement of an entitlement “is the consistency of the choice, or its apparent consistency, with other entitlements in the society.” In this case, granting the customary fishing entitlement to the rayats “reiterated and reinforced,” as Calabresi and Melamed put it, the values advanced by an entitlement protecting voluntary exchange, which, as I explain in a later section, was perhaps fundamental in the common law. Voluntary exchange, in turn, is importantly related to economic efficiency, as I will also explicate.

The Public Right to Fish: A Neglected Aspect?

But, what about the public right to fish? The right that had such a rich history and constitutional significance in England was apparently not used at all in any of the Court’s fishing rights decisions of the 1880s, and this seems strange. However, we must note that

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66 Ibid, p. 1121, the context of the statement is, of course, not fishing rights in colonial Bengal; rather, it is a general explication of what is meant by “consistency” between entitlements.
had the Court decided in favor of granting an unconditional property right to all fish in fisheries to the zamindars— as urged by Melitus and the various complainants—the public right to fish would have been eviscerated in Bengal. Given the colonial government’s keen appetite for liberally farming out riparian tracts for commercially profitable fishery use throughout tidal as well as non-tidal waters, any such complete protection of fishery rights would have made a public right to fish inconceivable in Bengal. Therefore, the Court’s decision, in a sense, actually protected the public right to fish in Bengal. But why was the public right not relied on to protect the customary fishers more directly?

In answering this question, it will again be helpful to consider economic implications. In the context of Anglo-Indian law, a public right to fish is an example of what Calabresi and Melamed call *inalienability rules.* That is, this is a right that is held by the public at large and has a certain constitutional significance through its relation to Magna Carta, and by virtue of being a constitutionally significant public right it is inalienable and not tradable by individuals. If a customary fisherman were allowed to continue fishing under the public right, a jalkar owner could not have ever truly been able to buy him out because the fisherman would have no legal authority to sell his public right to the owner. Consider the case of a jalkar owner negotiating with customary fishers and successfully reaching a deal where the fishers give up their fishing rights for some sum of money or other privileges. Perhaps such an agreement, like seasonal customary fishing, would be largely implicit and relational rather than actually drawn up with the Anglo-Indian law in mind. An enforcement problem now arises if the Court justifies customary fishing on the grounds of a public right to fish, which is an inalienable right. The problem arises because since the right is inalienable under the law,

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the law will not, as a general principle, recognize any transacting involving the right. Therefore, if a customary fisherman now decides to breach the contract and start fishing again, he will not be prosecutable under the Anglo-Indian law, which now recognizes his customary right as an extension of his inalienable right to fish.

Any contracting involving the giving up customary fishing rights would have thus been tremendously insecure because the force of the Anglo-Indian law would have run contrary to the security of such a contract. In fact, jalkar owners, recognizing the position of the law, would have likely not even attempted to buy the fishing right from the rayats. Since an inalienability protection precludes the possibility of voluntary exchange, it is much stronger than protection under a property rule and certainly much stronger than the liability rule protection the Court effectively instituted. A fisherman could have recommenced his fishing at any time and claimed protection under the public right, which was granted to him by the Magna Carta and, in England at least, superseded all property rights in tidal waters. Thus, a strong rationale for not using the public right to fish as a justification for customary fishing lies in the fact that protection under an inalienability rule would have impeded efforts at a consensual re-bargaining of the customary norms of fishing towards new Pareto improving outcomes.

The Court’s decision not to use the public right to fish in protecting customary fishermen seems the right one to achieve allocative efficiency and a measure of distributional equity in this case. That is, by not invoking a public right, the Court allowed for mutually beneficial exchange and the growth of social value from the fisheries, and for the rayats to have a share and a say in the distribution of this value. Indeed, this follows what historian Martin Sklar sees, through a study of judicial decisions in nineteenth century America, as being the fundamental position of the
common law. He notes, “[The common law] was intended to safeguard the right of individuals freely to enter the market and make contracts,” and also comments on the tendency of the common law to permit “flexibility among private parties in regulating the market and developing new market relations with changing circumstances.” So, the ruling of the Calcutta High Court, stemming from the same common law principles used by the nineteenth century American common law courts described by Sklar, might have been motivated by a desire to protect and promote voluntary exchange rather than to encourage economic efficiency as such. Below I investigate the conceptual relationship between economic efficiency and voluntary exchange.

Efficiency and Voluntariness

The rule put forth by the Calcutta High Court thus did remarkably well in terms of promoting voluntary efficient exchange. But an interesting question emerges right away: how did these judges, who knew nothing about Vilfredo Pareto or Ronald Coase, fashion a decision that so perfectly followed the demands of efficiency? Perhaps we can begin to answer this question by noting the relation between “voluntary” exchange and “efficient” exchange. Pareto improvement can be thought of as a condition for voluntary exchange. That is, it seems intuitive to suggest that individuals will only voluntarily enter into exchanges when they believe they will benefit, or at least not be hurt, by the exchange. And, indeed, this is all that the condition of Pareto improvement requires: all voluntary exchange must be mutually utility increasing. Importantly, an individual’s sense of self may extend beyond the needs and wants of his physical body and relate to his

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69 Ibid.
broader self-conception. Thus, “selfless” or altruistic actions, or actions taken for cultural or moral reasons, might still be understood as utility maximizing.

The soldier may see an invading army as such a threat to his cherished ideas and way of life that he is willing to lay down his life for his cause. And when he does this, economists postulate that it must be utility maximizing since he did it voluntarily. Under this account, there is no weakness of will and every voluntary action, even the soldier’s, reveals the individual’s underlying preferences. In this view of things, every action and exchange is, by definition, utility improving and thereby Pareto improving. Our theory can further accommodate such considerations through moral costs and benefits. Indeed, under our account, to say that voluntary exchange cannot be selfless is not equivalent to saying that voluntary exchange must proceed from the consideration of only the self at the complete exclusion of everyone else. Rather, it is only to say that there cannot be a selfless—that is, completely disinterested—vantage when considering voluntary exchange. The considerations of material wealth, physical integrity and health, as well as of other social, political, or cultural norms related to moral costs, are all united in various admixtures within individual selves.

70 That is, an individual cannot somehow do something even though he really does not want to do it. This is obviously a highly contentious claim. But whatever the merits and demerits of the revealed preferences story, allowing for weakness of will clearly poses significant analytic difficulties. Specifically, if weakness of will is a significant problem, we would need some standard of judging preferences that is better than behavior, and it is difficult to make a case for any such alternative standard. Therefore, it is not so much that revealed preferences is necessarily a very realistic behavioral theory. Rather, it is a realistic enough theory that is required for analytical efficiency in studying economics.

Since Pareto improvement and voluntary exchange are related in an intuitive manner, the Court could have reached Paretian outcomes by seeking to advance voluntary exchange in a way that allowed the necessary information to emerge through bargaining, rather than attempting to achieve economic efficiency directly by identifying the HVO a priori and placing property rights in that person. Under the principle of voluntary exchange, the story would go as follows: given that the Court did not know who valued fishing more, they wanted to create a situation where voluntary exchange—purely by virtue of the fact that it was voluntary—would naturally lead to the best outcome. And the rule arrived at, as shown above, could have been effective in promoting voluntary exchange. The linguistic shift from “Pareto efficiency” to “voluntary exchange” is significant in that it allows us to see the more universally accessible common sense notions behind the specialized economic language. Moreover, voluntary exchange, under the proper conditions, allows efficient outcomes to arise naturally and epiphenomenally through the informational function of trade and bargaining alone. Planned and directly imposed allocations, on the other hand, may not benefit from the informational value of repeated exchange and might, despite the best efforts of social planners, fail to realize efficiency.

If the above analysis regarding the public right to fish is correct, it would seem that the Court’s reasoning might indeed have been motivated by a conscious desire to promote voluntary exchange. However, it is perhaps still significant that the judges did not ever actually mention a desire to facilitate voluntary exchange. Rather, their decision was, going by their words alone, apparently completely motivated by the legal concepts that had become enshrined in the common law tradition operating under the principle of stare decisis. Could there then be something about these legal concepts themselves that
inherently promoted voluntary exchange and economic efficiency? Martin Sklar notes that “The overriding principle at common law in the United States was not unrestricted competition, but the natural liberty principle of freedom of contract: that is to say, the right to compete, not the compulsion to compete.” Sklar’s theory is developed in the context of a study of the rise of large corporations in the Progressive-era United States, but his framing is highly relevant to our case. For one, the common law, whether in England, the U.S., or India, shared a common heritage and many fundamental principles, and indeed promoting free contract and exchange could be one of them. The decision of the Calcutta High Court regarding fisheries could, under this account, be seen as arising epiphenomenally from the common law’s fundamental commitment to the principle of free contract. Notably, Sklar’s framing of this commitment as a “right to compete” fits with our suggestion that the decision to grant the right to the impoverished rayats was consistent with protecting a “right to compete”—or perhaps more fundamentally, an entitlement to participate, to freely contract, exchange, and regulate and develop new market relations with changing circumstances.

**Complementarity**

**The Court’s Rule, Transactions Costs, and Relational Contracting**

As we move towards a discussion of the events that followed the Court’s rulings in the fishing rights cases of the 1880s, it will be useful to again consider how the Court’s rule could have facilitated community-driven consensual exchange towards new fishing regimes. Below, I highlight a certain complementarity between the rule and relational

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contracting. As we have seen, the Court’s ruling reinforced the existing, albeit increasingly contentious, norms of relational customary fishing. However, as I show below, the rule also depended on the existence of a relational order to function properly. The purpose of this section is to qualify the efficiency analysis done above by emphasizing the potentially devastating influence of transactions costs. The efficiency analysis and, most importantly, its conclusion that the Court’s rule would facilitate consensual transacting towards efficient fishery usage, hinges on the belief that stable relational contracts based on consensual exchanges were achievable in late nineteenth century agrarian Bengal. The relational contracts, in turn, could solve many of the transactions cost issues.

To show how the desirable functioning of the rule depended on the underlying political economy, it will first be useful to look to situations where the fishing rule applied by the Court might have negative consequences. The *ferae naturae* theory gave property over fish in monsoon to whomever first caught or restrained the fish. One possible undesirable consequence of this rule illustrates the famous “tragedy of the commons” situation.\(^7\) In this situation, given that there are limited fish in even a flooded beel or jheel, any fish caught by a *rayat* may be seen by the *zamindar* as fish that cannot now be caught by him. Thus, fishing by any one individual presents a cost—a negative externality—to every other individual that uses the water body while the benefits only accrue to the successful fisherman. In maximizing his benefits and minimizing his costs, a fisherman will tend to overfish, just so he prevents competing users from grabbing more fish first. This kind of behavior will, in time, lead to wasted fish and the

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destruction of the fish stock.\textsuperscript{74} While this problem will always exist, it will be particularly acute when fishing is carried out in larger quantities, perhaps for commercial purposes, as was increasingly occurring in nineteenth century Bengal.

What other factors may contribute to such a situation? One extreme case is when each user hates every other user and actually derives utility just from excluding other users. Indeed, given the increasing animosity between zamindar and rayat, there might have been some risk of this happening in parts of Bengal. But, this animosity itself was largely rooted in zamindari abuses supported by British authorities. In refusing to extend the criminal law to fishing rights, the Court signaled that the use of force by the state must be governed by established legal principles rather than a desire to advance colonial authority. Zamindari interests would not, therefore, be automatically prioritized by the state and issues such as fishing rights would have to be negotiated within communities. The Court thereby indicated a willingness to stamp out the root of the class animosity that had come to characterize parts of Bengal. Self-interest dictated that even if the zamindars and rayats had come to hate each other, in the absence of class-based colonial policy, they would put their differences aside and bargain a solution regarding the use of the cherished fisheries. Over time, with the reestablishment of customary relational contracting, trust would blossom and animosity would subside.

A tragedy of the commons situation may also occur when the users of the commons have no stake in the long-term health of the commons—perhaps they are nomads or traveling profiteers seeking short-term gain over all else. But, of course, this was not the case in nineteenth century Bengal. There are, indeed, many such conceivable situations where the Court’s rule might have caused individuals to double down on

destructive patterns of use. But few seem applicable to Bengal. Proper management of fish stocks would tend to prevail where stable communities exist and established systems of relational contracting are in force. In these cases, as against the counterexamples presented above, users have a long-term stake in both each other and the health of the resource at issue. Rather than destructively compete, they will be incentivized to cooperate in consensual exchanges, which are, in this setting, easy to initiate.

In an earlier section, I suggested that the existence of relational contracts might have helped overcome transactions costs in Bengal. In that section, I mostly considered only those costs to the primary transactors of the renegotiation of fishing rights, while now we are dealing with externality problems. But of course, by Coase, given low transactions costs, externality problems such as those presented by the tragedy of the commons example will be incorporated into the broader negotiation over rights and usage over fish and fisheries. Furthermore, given the long-term framing of relational contracts and the importance of fish to Bengali communities specifically, both as a source of revenue and as a culturally significant commodity, any such negotiations would likely take the long-term health of fish stocks into account.75

The existence of relational contracts in Bengal helps justify the Court's rule against claims that it inadequately considered relevant and potentially destructive transacting problems. The history of bona fide relational contracting in rural Bengal suggests that there were, seemingly, easy ways in which relevant transactions costs could have been dealt with. The rule, in other words, was strikingly consonant with the existing

75 Elinor Ostrom has shown how communities can solve resource management problems without external authorities imposing centralized regulation or full private property rights in her study of institutional frameworks for sustainable resource management. See Ostrom, Elinor, *Governing the Commons: The Evolution of Institutions for Collective Action*, Cambridge: Cambridge University Press, 1990. See, for example, p. 190 for institutional settings that tend to lead to long-enduring common pool resource use.
modes of contracting and socio-economic organization in Bengal. Again, despite the fact that the concept of Pareto efficiency is typically not presented in terms of relational contracting, there is a striking consonance between executions of Pareto improving exchanges and the structure of relational systems. 76 There would have been reason to be hopeful that the outcome of the High Court’s ruling would follow the story presented by our efficiency analysis rather than a tragedy of the commons scenario. Moreover, the Court’s rule, in denying the applicability of the criminal law, further encouraged the zamindars and rayats to move back into the community-based voluntary contracting that had typified the pre-colonial fish order.

Conclusion

From the Beels of West Bengal to the Halls of Westminster

The Calcutta High Court developed a legal rule that encouraged a voluntary restructuring of the customary fish order. The rule was based on sound legal principles and rejected the class-based policymaking of the imperial regime. Of course, it could not—nor was it supposed to—completely alleviate the kinds of transaction problems that might have led to situations like the tragedy of the commons described above. However, the Court, in ruling as it did, expressed a hope that these problems were all solvable. Indeed, as I show above, such a hope finds a basis in the history of relational contracting in Bengal. To be sure, the shock of famine and the various other tectonic shifts in political economy that

had come about as a result of British rule had certainly altered and, in important ways, damaged the relational order in Bengal. Nevertheless, in the absence of class-based colonial policy, it seems likely that zamindar and rayat, even if considering only his self-interest, would have come to the bargaining table. There is reason to believe that the story told by our efficiency analysis would have actually come to fruition. Moreover, the Court’s rejection of arbitrary use of the criminal law in Bengal was one of the most important outcomes of the fish-related High Court cases of the 1880s.

At Warren Hastings’s impeachment, Burke had asserted that “justice will be done to India,” and indeed that call for justice, echoing from the halls of Westminster seemed, almost exactly a century later, to be finally realized in the beels and jheels of Bengal. In the case of the fish order, the Calcutta High Court showed a commitment to legal principles and the advancement of voluntary exchange over the class-based Machiavellianism of men like Dow. Was our efficiency analysis, in fact, realized? What effect did the Court’s ruling have on the Bengali fish order? Had the voice of the kings and generals, the grand strategies and sweeping narratives of men like Dow, been effectively countered by the High Court’s concern for day-to-day negotiation, bargaining, and voluntary exchange? The next chapter explores these questions and, more generally, the final resolution of the issue of fishing rights in colonial Bengal. We have, indeed, reached the final act of our story
Resolution
The Bengal Act II of 1889

Introduction

Private Fisheries Protection

As illustrated in the previous chapter, the rule developed by the Calcutta High Court could have facilitated a consensual re-bargaining of customary fishing towards Pareto improving outcomes. Most importantly, the Court’s rule could have brought the rayats back into systems of exchange and facilitated the rebuilding of communities throughout Bengal after the devastation of years of famine and internecine conflict. Of course, at the end of the day, this was but one legal decision regarding fishing and could not by itself have brought about such profound social change. However, it indicated a broader willingness on the part of the judiciary to decide cases on legal principle alone and take a stand against the colonial practice of making law and using the police power purely to advance colonial authority in India. In this light, the fisheries rule was not even simply about standing up for the downtrodden and marginalized rayats, as admirable an end as that might have been. Rather, it was about envisioning a Bengal where possibilities for voluntary exchange abounded and freedom from arbitrary compulsion and coercion was realized.

In 1783, Edmund Burke had celebrated the establishment of the Calcutta Supreme Court, “the chief purpose of which,” he had noted, “was to form a strong and solid security for the natives against the wrongs and oppressions of British subjects
resident in Bengal.” Indeed, the Calcutta High Court, descended from the Supreme Court, seemed to be functioning in the Burkean spirit when it decided the fishery matter through common law legal principles, with the welfare of Bengalis in mind, and with an understanding of the political economy of rural Bengal. The great promise of the fishery rule, however, was not to be fulfilled. In 1889, only about a year after the Court’s decisions in *Bhogiram Dome* and *Maya Ram Surma*, the legislature in Calcutta passed the Bengal Act II of 1889. This act, also known as the Private Fisheries Protection Act of 1889,\(^2\) criminalized all fishing and trespass in private fisheries and made the offence punishable with a fine not exceeding Rs. 50 on the first offence and simple or rigorous imprisonment of up to one month and/or a fine of up to Rs. 200 on subsequent offences. To be sure, these terms were better than the summary whippings and months long rigorous imprisonment summarily doled out to the customary fishers of Meherpur. However, the avowed intent in this case was to deter customary fishing altogether and not to foster a consensually bargained realignment of the fish order.

The story of colonialism—its *modus operandi* and its implications for Bengali society—has been touched on in various sections of this paper and has, from Dow’s words quoted early on, loomed over the project as a whole. Now, for the first time, British colonialism in Bengal becomes the central topic of analysis. The passage of the Bengal Act II, as I show below, follows Dow’s advice from a century before: “To give them property would only bind them with stronger ties to our interest, and make them

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more our subjects; or if the British nation prefers the name—more our slaves.” As is made clear in the following sections, the passage of the Fisheries Protection Act was, clearly and unambiguously, an expression of credible commitment from the British colonial authorities to the zamindari class very much in the spirit of Dow. This leads to a number of interesting questions that I subsequently turn to in this chapter: What caused Dow’s doctrine to remain relevant through a century of British rule? Why did it prevail over the vision of Bengali society promoted by the Calcutta High Court justices? Indeed, how did the two views—Dow’s on the one hand and the justices’ on the other—come to coexist within the same imperial institutional apparatus? These questions will guide the final pages of our analysis of the evolution of fishing rights in nineteenth century Bengal.

The Passage of the Act

A Legislature for Bengal: the Indian Councils Act of 1861

The utilitarian philosopher James Mill had conceived of the Indian legislature as a small body of experts in the 1830s. As Stokes notes, the utilitarians—Bentham and Mill among them—had thought of legislation as a science; it was “a task for the ablest philosophical mind, a subject for dispassionate study and expert knowledge, and not the sport of political passion or of popular and ignorant prejudice.” While the structure of

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3 Dow, Alexander, *The History of Hindostan from the Death of Akbar to the Complete Settlement of the Empire Under Aurungzebe* to which are Prefixed, I. A Dissertation on the Origin and Nature of Despotism in Hindostan, II. An Enquiry into the State of Bengal; With a Plan of Restoring that Kingdom to its Former Prosperity and Splendor, London: John Murray, 1792, p. clv.


5 Ibid, pp. 176-177.
Indian legislatures was changed many times through the nineteenth century by acts of Parliament, in 1889 it still resembled the Millian panel of supposed “experts” and was by no means a genuinely representative body. While legislative reform would occur again in 1892, only three years after the passage of the Private Fisheries Protection Act, in 1889 the Indian legislatures were structured according to the Indian Councils Act passed by Parliament in 1861. Under the Councils Act, members of the Crown’s executive and administrative elite, as well as a chosen few from the Indian population at large, conducted legislation for India in the major colonial centers of Calcutta, Bombay, and Madras.

The Indian Councils Act of 1861 differed from previous attempts in that, for the first time, it created legislative councils that were made to include a certain proportion of individuals who were not directly affiliated with the Crown. The Act created legislative councils in Bombay and Madras, which advised the governors of those provinces, as well as one in Calcutta that advised the governor-general of British India as a whole.⁶ The Indian Councils Act of 1861 retained what had been the governor-general’s executive council. The members of this council were all directly in the service of the Crown—there were five of them, including a jurist, who were each appointed by the Secretary of State for India. Additionally, the commander-in-chief of the British military in India sat as an extraordinary member of the council who outranked everyone save the governor-general.⁷ Prior to the Indian Councils Act of 1861, this executive council had been the sole legislative body for India. The legislative and executive branches of government were thus coextensive prior to the Councils Act of 1861.

⁷ Ibid, pp. 20-23.
The Councils Act, for the first time, made provisions for the appointment of six to twelve additional members who were to serve two-year terms and have an advisory role in legislative matters only. Furthermore, of these additional members, at least one-half were required to be outside of the “civil or military service of the Crown of India.” These additional members could be European or Indians—there was no restriction as to race. Thus, in legislative matters, the executive council of the governor-general was now expanded into this bigger “legislative council” that included people who were not directly affiliated with the Crown. The Act, moreover, created additional legislative councils in the Bombay and Madras presidencies and gave the governor-general, with the sanction of the Secretary of State, the right to create more such legislative councils at the provincial level at his discretion. All of these councils, staffed by nominated members pulled from the elite of Anglo-Indian society resembled more a committee of experts and special interests than a representative body.

Sir Charles Wood, a Liberal MP, former Chancellor of the Exchequer, and Secretary of State for India\(^9\) at the time, was clear about the impossibility of representative government in India as he introduced the Indian Councils Act of 1861 in the House of Commons:

\begin{quote}
The natives who are resident in the towns no more represent the resident native population than a highly educated native of London, at the present day, represents a highland chieftain or a feudal baron of half a dozen centuries ago.
\end{quote}

\(^9\) The Secretary of State for India was a member of the Her Majesty’s Privy Council in charge of governance of British India.
To talk of a native representation is, therefore, to talk of that which is simply and utterly impossible.\textsuperscript{10}

While Wood’s characterization of the Indian society of the time is not inaccurate, it betrays the same Benthamite attitude towards government in India that, by Shore, guided much English policy in India. Representation in India, for Wood, was not to be thought of as a cherished right, as it was in England or its former American colonies, which had a great value in itself. Rather, it was simply one of many possible forms of government and one that was hopelessly unsuited, for whatever reason, to the conditions of Indian society. Furthermore, any pretense of true representation was contradicted by the severe limits on the powers of the legislative councils. Wood noted:

\begin{quote}
It is obviously necessary that these bodies should not be empowered to legislate on subjects which I may call of Indian rather than of local importance. The Indian debt, the customs of the country, the army of India, and other matters, into the details of which it is not necessary that I should enter, belong to a class of subjects which the local Legislatures will be prohibited from entering upon without the sanction of the Governor-General.\textsuperscript{11}
\end{quote}

The Indian Councils Act of 1861 was thus the latest attempt at creating a space for legislating on local matters without disturbing the broader concerns of revenue and military power that drove the colonial enterprise. While perhaps envisioned as bodies of experts, Indian legislatures, in practice, were more pulpits for the wealthy vested interests that had developed hand-in-hand with colonialism in India. Indeed, as illustrated later in this chapter, the “science” of legislation in India was bound up with the “science” of colonialism as imagined by men like Dow.

\textsuperscript{11} Ibid, p. 18.
The job of the legislative councils was to promulgate legislation as the need arose. Members of the various councils worked together to formulate laws for India at large or specific to its various provinces. The governor-general, however, retained an ultimate authority to repeal, amend, or alter any law as he saw fit. The governor-general thus could completely disregard and overrule the legislative council if he so desired.

Moreover, any legislation for India, even after being assented to by the governor-general, had to be transmitted to the Secretary of State for India, who gave London’s final approval and reserved the right to express any views he had on the specific matter at hand. This was the state of the Indian legislature when the Private Fisheries Protection Act was introduced in its final form before the legislative council at Calcutta on a March day that was so sultry that the president of the council felt compelled to apologize for summoning the councilors.

The Zamindars’ Complaint

The government first took up the matter of private fisheries protection at the insistence of the British India Association, an organization of zamindars. In a memorandum to the Government of Bengal, the zamindars expressed their dismay at the rule developed by the Calcutta High Court regarding fishing rights and advanced their case in terms of two criteria: (1) The supposed historical existence of an exclusive fishery right and (2) the effects of the Court’s ruling on revenue. One major line of argument for the zamindars was that a full property right over fish in a fishery had historically been granted to them.

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12 Under the Indian Councils Act of 1861 the governor-general could appoint a president of the council who would lead the council in the governor-general’s absence.
and that the High Court ruling contravened what had been an established norm in the country:

Your memorialists humbly insist that the right of landholders to julkurs situated within their estates and talooks [lands], whether in the form of enclosed tanks, running streams, or large jheels and bheels in communication with tidal rivers, is unquestionable and had been recognized in a long series of decisions…it has been ably argued, and with much learning, that the taking of fish under such circumstances is not theft; but however that may be, it has generally, as shown above, been looked upon and treated as theft in this country.  

This line of argument, as we know, was either misinformed or disingenuous. To be sure, colonial authorities, exemplified perhaps by men like P.G. Melitus and J. Knox-Wight, had been only too eager to prosecute peasants at the behest of landowners since the days of Permanent Settlement. Indeed, this attitude followed from the plan, descended from Dow, of establishing British power through propping up the zamindari class. However, these relatively recent events notwithstanding, there was no historical basis for exclusive fishery rights in Bengal; the history of seasonal customary fishing the pre-colonial and early colonial period contravenes any such argument. Indeed, the advocate general, the jurist on the legislative council, investigated the zamindar’s assertion of a historical, exclusive fishery right and was unable to find any basis for it:

I have not been able to find that this was the law of this country at any time. I have not been able to discover a single case in the Nizamut Adawlut

\[14\] Ibid, p. 657.
[Mughal courts] reports, and the Mohammedan law contains no provision constituting the taking of fish out of water which forms the subject of a private fishery a criminal offence.  

Indeed, this account follows the story told in chapter one. Norms of use of beels and jheels for fishing were a matter of negotiations within communities based on respective needs and wants—they were not a matter for formal judicial arbitration at all. Fishing rights thus developed along the lines of an implicit contract in pre-colonial Bengal. The British India Association’s assertion that zamindars were the historical and therefore rightful owners of an exclusive fishery rights was ultimately not given much credence in the decision of the Bengali legislature.

The historical case, however, was not the only argument advanced by the zamindars. A more powerful argument was based on the consequences of the Court’s rule for the flow of revenue to both the zamindars and, by extension, the Crown. In building this argument, the zamindars first outlined the ineffectiveness of bringing civil suits against the impoverished peasants who were most likely to fish in their waters. The ineffectiveness of civil suits, they insisted, meant that there was no effective deterrent to peasants fishing unlawfully in fisheries. Given the lack of such deterrence, the British legislators envisioned an impending calamity for the profitability of fisheries:

There can be little doubt…that the value of julkur property will be seriously impaired, if not altogether destroyed, when the real state of the law becomes generally known and when the mass of the people realize that violation of julkur rights is not a criminal offence…The zemindars are clearly entitled on equitable grounds to ask that Government should provide adequate protection for property, from which it derives a considerable revenue.

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16 Ibid, p. 657.
Indeed, the concern over how the Court’s rule would affect the revenues of the colonial government was so great that the matter was referred to the Board of Revenue for an estimate. While the Board of Revenue could not arrive at any satisfactory figures, the referral itself seems to have caused a great deal of alarm and a consensus seems to have been reached within the Board of Revenue that the property rights of fishery owners should be strengthened in order to protect revenue interests.  

The Advocate General’s Speech and the Passage of the Bill

With all of this in mind, the advocate general—presumably the advocate general of Bengal, a jurist on the legislative council—presented the final bill on that sweltering March day in Calcutta. He defended the judgment of the High Court justices and the soundness of the legal principle they developed while rejecting the zamindars’ appeal to a historically established right. Most of his speech, in fact, suggested a marked contempt for the legislation he was introducing. I include an extended section so that the tone may come through to the reader:

I am prepared to admit that the Judges of the High Courts are not infallible, but I think those who endeavor to impeach the decisions of the highest tribunals of this country and the opinions of Judges of experience should put forward a strong case. Such a case might be made by reference to decided cases which contravene the decisions objected to, or by challenging the principle on which the decision are rested, or by showing that other acknowledged and well-recognized principles apply to the subject itself. Now, those who have made objections have done nothing of the kind…Under these circumstances the objections, as far as I am aware, resolve themselves into irrelevant arguments, vituperative assertions, and an array of words which

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17 Ibid, p. 656.
exhibit a confusion of thought as to the meaning of “property” and “possession,” and demonstrate nothing beyond a want of familiarity with the subject under consideration.\textsuperscript{18}

Having read the preceding passage, one may be forgiven for believing that the Bengal Act II of 1889 was not to be passed after all.

But the Act was passed. While the advocate general devoted the vast majority of his speech to defending the legal reasoning behind the High Court’s rule and disparaging attempts to undermine it, he ultimately conceded the necessity for such a bill. The zamindars’ complaints, while clearly representative of the “irrelevant arguments” and “vituperative assertions” the advocate general so disdained, were nevertheless somehow “in a temperate spirit” and “supported by very fair reasoning.”\textsuperscript{19} What was this “fair reasoning?” Ostensibly, as described above, it was reasoning based on revenue interests. That is, if the British did not strengthen the property rights of fishery owners they would suffer a massive loss of revenue from fisheries. Even this, as I detail in a later section, was a sham. The real reasoning behind private fisheries protection was not so much based on the consequences to revenue directly so much as the need to express a credible commitment to the zamindar class that was so central to British power in Bengal. I return to this topic after further explicating the provisions of the bill.

This bill that was passed criminalized trespass and the taking of fish from fisheries, regardless of whether these fisheries were enclosed or connected to broader riparian systems and regardless of the state of inundation at the time of entering or taking. The president of the council emphasized what he saw as the leniency of the punishments. By the advocate general, the explicit goals of the bill were:

\textsuperscript{18} Ibid, p. 660.
\textsuperscript{19} Ibid, p. 661.
Indeed, the emphasis on prevention follows the deterrent intent of the bill. Notably, this deterrence was not only applied through the criminal liability provisions of fines and imprisonment mentioned above. The Private Fisheries Act also called for the confiscation of all fish caught by the offender and any traps or devices used by him in catching the fish. Thus there was no way in which an offending fisherman could simply treat the law as a forced exchange. That is, he could not go on fishing and accept the imposed fine when caught, recognizing that his enjoyment of fish was worth more to him than his fine—once violated, the law would deprive him of his means to continue fishing whatever his calculations of cost and benefit. Of course, the law’s emphasis on deterrence is further outlined by the fact that if a fisherman were caught more than once, he would be imprisoned, which would surely be an unacceptably high liability price.

Despite the deterrent nature of the law, it might still be claimed that the bill was a major improvement from the previously existing state of affairs. No longer could offending *rayats* be summarily whipped and sentenced to imprisonments of arbitrary length, for at least now there was an enforceable standard of punishment. Indeed, one might even be inclined to see the law as a compromise between the Alexander Dow viewpoint, which would have deeply prioritized zamindari interests, and the viewpoint of men like the High Court justices and the advocate general, who sought to guide policy through established legal principles instead. Such a view, however, would be mistaken.

The fisheries law represented not so much a compromise as a capitulation to the Dowian

\[20\] Ibid.
view. The rule established by the High Court envisioned a Bengal with great possibilities of voluntary exchange and freedom from coercion. The fisheries law, however, circumscribed this worldview by essentially saying that voluntary exchange and freedom from arbitrary coercion were all good except when they were deemed to interfere with revenue or colonial authority. But, of course, to circumscribe voluntary exchange and freedom in this way was really just to undermine it completely. Even though the Private Fisheries Act instituted a relatively lenient punishment, it represented a further legalization and institutionalization of class-based, extractive and exploitative policy. It thus vindicated the views of Alexander Dow and signaled a triumph of his political thinking over the kind of thinking advocated by the High Court justices. The story of how and why this happened is the subject of the rest of this chapter.

Colonial Authority Through an Implicit Contract

Implicit Contracting between Zamindars and the British

Revenue was ostensibly the decisive consideration in motivating the Private Fisheries Protection Act. However, there was more here than meets the eye. What mattered to the British authorities was not so much the change in revenue flow from having mixed use fisheries. After all, the imagined scenario of swarms of peasant descending on the beels and destroying the value of fisheries was fanciful. The peasants had to work, they had lives to live that precluded engaging in the kind of “promiscuous killing of fish” predicted by the zamindars and British authorities; moreover, their needs were not so great as to exhaust a large body of water of all or most of the fish in it. Why not simply ask the zamindars to negotiate with the customary fishermen to get them to stop fishing as the High Court had implicitly done? The answer lies in the fact that the real concern
for the British was not the specific impact on revenue from more customary fishing; rather, the graver concern was the potential impact on the whole *zamindari* system of revenue collection of ignoring or working against *zamindari* interests in the case of fisheries.

The president of the council hints at this concern when he notes:

> The landholding classes, if they find that the law does not afford them adequate protection in such cases, will take other means to protect right[s] to which they attach great value, and there will certainly be many cases in which violence will be used on one or both sides if the law is left as at present.\(^{21}\)

Why would the *zamindars* threaten violence over fisheries? After all, fisheries did not have any significant cultural or sentimental value for the *zamindars* in the same way that customary fishing did for the *rayats*. Fisheries were purely a pecuniary interest and as such, there seems to be no room for the potentially ballooning moral costs described in chapter two. The best course of action for the *zamindars* seems to have been to negotiate with *rayats* and secure an exclusive fishery right by compensating them for giving up the customary right that had been legally recognized by the High Court. To help understand why the *zamindars* did not simply negotiate with the *rayats* and instead threatened violence and disorder, I introduce one final implicit relational contract: that between the *zamindars* and the British.

Dow’s views on British authority in India were far from obsolete by the late eighteenth century. Lord Lytton, governor-general of India from 1876-1880, in 1877 wrote the following to his friend, the Conservative politician and eventual Prime Minister, Lord Salisbury:

\(^{21}\) Ibid, p. 657.
I am convinced that the fundamental mistake of able and experienced Indian officials is a belief that we can hold India securely by what they call good government; that is to say, by improving the condition of the ryot, strictly administering justice, spending immense sums on irrigation works, etc.

Politically speaking, the Indian peasantry is an inert mass. If it ever moves at all, it will move in obedience, not to its British benefactors, but to its native chiefs and princes, however tyrannical they may be. The only political representatives of native opinion are the Baboos [bhadralok], whom we have educated to write semi-seditious articles in the native Press, and who really represent nothing but the social anomaly of their own position...To secure completely, and efficiently utilize, the Indian aristocracy is, I am convinced, the most important problem now before us.22

Lytton, like Dow, saw securing the rights and power of the landed aristocracy as the best way to establish British control in India. Indeed, in Lytton’s letter to Salisbury, the terms of what can be characterized as an implicit contract were already quite clearly explicated. Namely, the exchange was designed as follows: the British would secure the local interests of the zamindars and in return the zamindars would provide them with revenue and ensure broader order and obedience to British rule throughout the Indian villages and towns. The first great exchange that established this contract was Permanent Settlement, which recognized full proprietary rights of zamindars indefinitely. This had all the exaggerated pomp and circumstance of an initial Maussian gift exchange between tentative contractors. Moreover, by granting the right indefinitely, the British showed a willingness to keep contracting—to continually exchange and build the trust that is so essential to a relational contract.

Credible Threats and Credible Commitments

One immediate problem in this implicit contract is with enforcement. This problem arises because it only makes sense for each party to cooperate if the other also cooperates. That is, it only makes sense for the zamindars to assiduously collect revenue for the British and maintain obedience to British authority if the British authorities, for their part, aid zamindari interests. Similarly, it only makes sense for the British to back the zamindars if the zamindars collect revenue for them and help British authority take root in Indian society. Another reason this problem arises is because there is no external force compelling either side to stick to these terms. If the zamindars foment rebellion well enough then British authority may be completely eroded—that is to say, the implicit contract will be violated without the zamindars having to pay a price for violating it. Similarly if the British ignore zamindari interests, there is no tribunal where they may be charged with breach of contract and made to pay damages. In this environment of insecurity, contractors will try to impress on one another that it makes sense to keep collaborating, either by showing their own commitment to collaboration or by highlighting the significant costs to be incurred from a deviation from collusion. By using these strategies, the contract can be made self-enforcing. 23

An example of the first kind of tactic is Permanent Settlement itself. Permanent Settlement represented a credible commitment by the British to support zamindari interests. As Douglass North and Barry Weingast note:

A ruler can establish such [credible] commitment in two ways. One is by setting a precedent of “responsible behavior,” appearing to be committed to a

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23 As noted in chapter one, a contract is self-enforcing when it is mutually incentivized—that is, it makes most sense for all parties involved and no third party enforcement is required.
set of rules that he or she will consistently enforce. The second is by being constrained to obey a set of rules that do not permit leeway for violating commitments.24

Permanent Settlement is an example of the second kind of strategy. It is a commitment to the zamindars because it recognizes their full proprietary rights in perpetuity. What makes it a credible commitment is that it is an institutionalized and legalized article of policy, rather than a one-time declaration. Permanent Settlement guided the reorganization of the East India Company and the British administrative apparatus in Bengal under Cornwallis. Thus, once the British recognized zamindari proprietary rights in perpetuity through Permanent Settlement, they could no longer go back to revenue farming or other strategies that caused insecurity in zamindari land rights without incurring significant costs simply from having to reorganize their own administrative apparatus. By constraining their future behavior in this way, the British showed a credible commitment to the zamindars.

The second kind of strategy, highlighting the costs of deviation, is known as credible threat. Under this kind of reasoning, one party, say the zamindars, would have to show that if the British, the other party in this case, deviated from cooperation then the zamindars would inflict a significant punishment on the British. The prospect of this punishment would then make deviation a very unappealing option for the British. One major challenge with this is, of course, that it may be difficult to make a threat credible. Nevertheless, this framework perhaps helps shed some light on the zamindari threat of violence if protection of their fisheries was not instituted. In the environment of general strife and periodic uprising in eighteenth century Bengal, the zamindars likely did not have

to do a great deal to make their threat credible. The British, shaken by the Mutiny of 1857, were perhaps apt to consider any expression of intent to cause disorder as a credible threat in the context of their implicit contract with the zamindars. Notably, this kind of strategy on the part of the zamindars would not have required any kind of specialized knowledge or, say, understanding of game theory. All it required was the simple understanding that they need us as much as we need them; without us their power in this country is seriously jeopardized, so we can use this fact—even just in driving home our awareness of it—to further advance our own interests. The zamindars, for their part, had to keep applying the violent whip to extract greater revenues, absorb any rayat anger and maintain order, and thereby allow the British to more effectively extract revenue and maintain order while keeping up the façade of being a civilized and enlightened ruling power.

The Protection of Private Fisheries Act as Credible Commitment

Given all of this, the Private Fisheries Act is best understood as an expression of credible commitment by the British to the zamindars. It was not really about the flow of revenue from fisheries at all—it did not matter that the Board of Revenue could not come up with numbers detailing the gain of revenue from making fisheries exclusive because this was not the fundamental concern. Rather, the fundamental concern had to do with securing the continued cooperation of the zamindari class. To be sure, part of this cooperation involved ensuring the continuous flow of revenue, but it went beyond revenue to the deeper questions of rooting British authority within Indian society and ensuring a continuing obedience to colonial authority in Bengal.
Indeed, in this context it is clear how the Private Fisheries Act expressed a commitment to the zamindars. After all, it demonstrated a willingness to advance zamindari business interests and completely overlook the reasoning of the Calcutta High Court. However, what is more important is not that it was just a commitment to the zamindari class but that it was a credible commitment. What made it credible was the use of law to represent and institutionalize zamindari interests. Indeed, the Bengal Act II did not just signify a commitment to the zamindars, it signified a commitment to continue to use the legal apparatus to codify and institutionalize zamindari interests. So, in this view, the meaning of the Private Fisheries Act went far beyond the question of fisheries and fishing rights. The Act was the latest exchange in an ongoing implicit relational contract between the zamindars and the British that had been inaugurated by Permanent Settlement. The British advanced zamindari interests while zamindars, for their part, did the dirty work of extracting revenue from tenants and maintaining order.

Another hint that the Private Fisheries Protection Act was really an expression of credible commitment rather than a one-time revenue based policy lies in the fact that it was only made applicable to Bengal. Indeed, the president of the council had actually suggested that a bill should be passed that covered all of India; since the ruling of the Calcutta High Court applied to all of India and not just Bengal, his reasoning went, legislation to counter that ruling should also cover all of India, within which fishery disputes likely occurred in many different areas. However, the governor-general’s response was that “the peculiar state of circumstances existed principally in Bengal and Assam,”25 therefore, there was no need to pass a countrywide bill. This reasoning is perhaps justifiable on purely revenue grounds. Fish were especially culturally significant

in Bengal and perhaps the impact to revenue would not have been as substantial in other states. Furthermore, no other parts of the country experienced the same kinds of seasonal flooding that blurred the lines between lakes, rivers, beels, and jheels in Bengal. However, disputes over fisheries clearly occurred, for example, in Madras, as is evident from various fishery-related court cases from that region.\textsuperscript{26} Surely, strengthening fishery rights in Madras would have also helped the cause of revenue. So it seems that revenue was not the primary concern here.

Perhaps the governor-general’s reference to “the peculiar state of circumstances” did not just have to do with the cultural significance of fish or wetland topography. Indeed, another “peculiar set of circumstances” more or less unique to Bengal was the zamindari system itself. In Madras, for one, which had been colonized later than Bengal, British revenue policy was structured around the rayatwari system. Under the rayatwari system, revenue was settled directly between British authorities and cultivators; there was no officially recognized zamindari class and, consequently, no implicit contract along the lines of the one that existed in Bengal. These facts perhaps add more credence to the view that the Private Fisheries Act was really an expression of credible commitment by the British to the zamindari class of Bengal. Indeed, it seems quite likely that the British passed the act not so much with a view toward protecting fisheries per se, but with a view toward showing their commitment to use the increasingly substantial legal apparatus to continually advance zamindari interests. In return, they asked for continued cooperation from the zamindari class in ensuring a steady flow of revenue and maintaining order and British rule across the Bengali countryside. The zamindars applied the whip to keep up with British revenue demands and maintained obedience among the peasant population.

\textsuperscript{26} See, for example, Regina v. Revu Potha (1882) I.L.R. 5 Mad. 390 and Subba Reddi v. Munsboor Ali Saheb (1901) I.L.R. 24 Mad. 81.
This was their contribution to the implicit contract. If they did this well, they would receive any surplus rents over the demands of the government, and so long as they continued to do it, they showed a commitment to the implicit contract and thus the British government in India. Through effective use of credible commitment and credible threat the relational contract between zamindars and the British was made self-enforcing. The analysis of the implicit relational contract between the zamindars and British finally begins to tie the story of the evolution of fishing rights directly to the broader project of colonialism as envisioned by men like Dow, Philip Francis, and John Shore. In concluding this chapter, and the substantial work of this paper, I consider some broader implications of British colonial capitalism in the Gangetic delta.

Colonial Capitalism Comes to Bengal

The Accumulation of Property Rights in Colonial Bengal

One important consequence of using the legal framework to advance zamindari interests has to do with how property came to be acquired in colonial Bengal. Structures of ownership over the productive means of society determined how the gains from market exchange were distributed across all of those who contributed to the productive process. As market exchange expanded and the possibilities for profitable business endeavors grew with it, questions of ownership over the means and processes of commercial production and exchange became increasingly important. In other words, how property rights were distributed greatly impacted who would receive how much of the increasing surpluses from exchange. For example, in the case of fisheries, the customary fishermen would have received some of the profits from commercial fishery use if the jalkar
owners bribed them to relinquish their rights under the High Court’s rule. However, in the alternate allocation of property rights as prescribed by the Private Fisheries Protection Act, where the jalkar owners possessed exclusive fishing rights in their fisheries, the full surplus accumulated to the owners and the customary fishermen received nothing.

In general, as illustrated in chapter two, the zamindars showed a great eagerness to alienate the rayats from the proceeds of the productive process to the greatest possible extent. The rayats faced increasing rents and in general received none of the surplus acquired through commerce. In the case of the profitable indigo and opium plantations, they were often pushed into bonded labor and manipulated and coerced in such a way that they never saw any of the profit, which would never have been acquired but for the contribution of their labor. This practice of excluding the rayats from the gains from commerce by coercive force often led to the violence and destruction that periodically erupted in nineteenth century Bengal. In chapter two, an important question was asked that we are now in a better position to answer: given the possibility of conflict and the destruction of zamindari wealth and property that ensued, why did the zamindars continually push such stiff demands on the rayats? Why not, instead, seek to cooperate with the rayats and bargain towards outcomes that avoided destructive conflict and allowed for greater value to be realized in the long run for both parties? I suggested then that the reason was the possibility of a fundamental realignment of structures of property rights in the favor of zamindars sanctioned by British authorities. Given the analysis done above, it is perhaps now clear exactly how and why this kind of class-based realignment of property relations was common in colonial Bengal.
What was going on in colonial Bengal was a process of *primitive accumulation*. Primitive accumulation is typically seen as the accumulation of capital and productive means that predates capitalism—hence it is “primitive” or “original.” Adam Smith, for example, noted that “the accumulation of stock must, in the nature of things, be previous to the division of labor.”\(^27\) For Smith, the accumulation of capital seems to be a necessary condition for division of labor to occur.\(^28\) But for Smith, this original accumulation happened peacefully, through natural propensities to save and store goods. For Marx, however, primitive accumulation was not determined by the natural tendencies in the division of labor, but acquired through force by certain individuals or groups. “The methods of primitive accumulation,” he wrote, “are anything but idyllic,” instead “conquest, enslavement, robbery, murder, in short, force, play the greatest part.”\(^29\) The kind of accumulation of property rights exemplified by the passage of the Private Fisheries Protection Act in Bengal follows Marx’s account in its undercurrent of forcible expropriation. Moreover, in nineteenth century Bengal, this kind of accumulation did not actually precede capitalism, but was contemporaneous with and central to the working of colonial capitalism.

Of course, in the case of fisheries, use of force was not the proximate cause of the eventual property right allocation. Rather, the *jalkar* owners gained exclusive rights through the passage of legislation. But a key point here, which I had begun to raise in chapter two, has to do with the relationship between the logic of violence and conflict.

\(^28\) He notes, “A weaver cannot apply himself entirely to his peculiar business, unless there is beforehand stored up somewhere, either in his own possession or that of some other person, a stock sufficient to maintain him, and to supply him with the materials and tools of his work, till he has not only completed but sold his web.” Ibid, p. 185.
and the possibility of such legislation to advance privileged zamindari interests. Why did it make sense for the zamindars to persist in their exploitative demands and risk conflict? It made sense precisely because of the possibility of lobbying British authorities to allocate property rights in their favor. The possibility of using the overwhelming force of British authority to advance and protect their special interests, as per the implicit contract, meant that there was no real need for the zamindars to take part in consensual bargaining over realigning property rights towards efficient as well as distributionally equitable allocations. Moreover, this diminished the impetus for the zamindars to cooperate with rayats at all—they could persist in their demands knowing that no matter how much the rayats protested or rose up in revolt, the British were likely to bring the full weight of their system of law and government behind zamindari interests. Indeed, the implicit contract between them and the British had been set up just so that they could persist in their demands on the rayats—to do so, and thereby raise revenue and assert authority over the rayats, was part of the zamindars’ contribution to the British under the relational contract.

The use of force, central to primitive accumulation by Marx, thus lay just under the surface of the “civilized” discussions and lawmaking that took place in the great halls of imperial Calcutta. The use of the formal legal apparatus to advance zamindari interests was particularly problematic in that it not only incentivized, but also legitimated zamindari noncooperation with the rayats. Thus, matters of economic organization that might have otherwise been decided through processes of consensual negotiation came to descend into violent conflict. The spirit of consensual, mutually beneficial exchange was not at the heart of the expansion of markets and trade in Bengal. Rather, the expansion of markets and trade brought a reorganization of the Bengali economy along lines that were
defined by the implicit contract between the British and the zamindars. Starting with Permanent Settlement, which gave zamindars full proprietary rights and neglected to define any tenancy rights, property rights were acquired by the zamindars in a process similar to Marx’s primitive accumulation. Use of force and coercion against peasants was widespread and the British, by showing a credible commitment to furthering zamindari interests, weakened the zamindars’ reasons for engaging in voluntary negotiations with rayats. British policy in Bengal thus played no small part in dismantling the integrity of rural communities—an integrity that had been apparent in the relational customary fishing arrangements of old. The new zamindars, under the implicit relational contract, were their partners in crime.

**Why not Good Governance?**

But what was it about colonial capitalism, more generally, that made it so disastrous for Bengali communities? Was Lord Lytton right in suggesting that “good governance” was fundamentally incompatible with the broader project of colonialism in Bengal? As Lytton described it, good governance involved deciding judicial matters through established legal principles, investing in public works, and bringing the marginalized rayats into Indian civil society. But perhaps for the purpose of our analysis we can instead turn to the decision of the High Court justices, as explicated in the previous chapter, as a standard of good governance. To be sure, the High Court, in that decision, used established legal principles and sought to bring the rayats into systems of exchange. But, the High Court decision went beyond these individual considerations. The most powerful aspect of the ruling was that the High Court invited rayats and zamindars to engage in community-enhancing voluntary exchange and strengthen and rebuild the
relational contracts that had been in place prior to colonial times. This is the hallmark of 
good governance that I use in this section: a commitment to foster the integrity of 
communities and facilitate, within reasonable limitations, consensually bargained order in 
social and economic life. Below I explore the tensions between the High Court’s view of 
good governance and the ends of colonialism.

In our analysis of the Court’s rule in chapter three, we did not consider the 
objectives of colonialism. But the Court itself was, of course, set up under the aegis of 
British colonialism and ultimately had to answer to the needs of that broader project. In 
this section I outline several ways in which the ends of good governance contradicted 
the ends of colonial authority in Bengal. One source of contradiction between good 
governance and colonialism that has already been pointed to arises from the necessity to 
maximize revenues from colonial possessions. The British enterprise in Bengal had 
started out as a business venture under the East India Company and the aim then had 
been to extract as much revenue as possible. As the fisheries case makes clear, even a 
century later, after India had passed on to the direct control of the Crown, revenue 
remained a paramount concern. Under this account, since colonial governance in India 
was itself motivated by a desire for revenue, any time a voluntary re-bargaining of 
property rights, for example, came into conflict with revenue considerations, as it did in 
the fisheries case, good governance considerations had to yield to the hard demands of 
revenue.

Another related source of contradiction was the zamindari system. The British, in 
their attempt to meet the needs of revenue and establish authority in Indian society, had 
spawned a new zamindari class, which was very different in its proclivities from the rajas, 
princes, and small-time barons who had been the zamindars of old. These new zamindars
were often absentee landlords who tended to see their estates as financial instruments to be leveraged to the greatest possible extent. Indeed, these zamindars became the educated elite of Bengali society under an implicit relational contract with the British wherein their interests were advanced in return for a continual stream of revenue to the British and the establishment of order and obedience to British authority, using violence and coercion when necessary. In this way, British authority in Bengal came to depend on the zamindars. Any time good governance came into conflict with zamindari interests, as it did in the fisheries matter, good governance had to yield. Both the interest of revenue in itself and the provisions of the implicit contract between the British and the zamindars created a situation where good governance was ultimately incompatible with British authority in Bengal, just as Lytton had noted. In the grand strategies and sweeping mythologies of colonialism, we find no parable that convincingly accommodates both colonialism and day-to-day good governance. The institutional order of colonialism in Bengal created a situation where there was no room for the Calcutta High Court’s rule on the fisheries matter. Community-enhancing voluntary exchange and consensual re-bargaining of the particulars of social and economic life could not be promoted by the colonial government as long as they came into conflict with the more essential and deeply institutionalized ends of colonialism.

Conclusion

Dow’s Legacy

The words with which I began this paper ultimately also seem like a fitting end: “To give them property,” Alexander Dow once wrote of the Bengalis, “would only bind them with stronger ties to our interest, and make them more our subjects; or if the British
nation prefers the name—more our slaves.” More than a century after he wrote these words, they seem to have become ingrained in the increasingly complex institutional apparatus of colonial government in Bengal. Indeed, in that time, devastating famine, a Crown takeover of India from the East India Company, and numerous attempts at reform had not really altered the fundamental structures of colonialism in Bengal. The interests of revenue and power, united in the relational contract with the zamindars, remained deeply institutionalized in British governance in Bengal. And, as the passage of the Private Fisheries Protection Act shows, Dow’s suggestion “to give them property” had become the guiding principle of the implicit contract.

But by the 1870s and 1880s, some things really did seem to be changing. British politicians and administrators were increasingly beginning to see their project in India as a kind of nation building. The former Governor of Madras Charles Trevelyan, for example, appearing before a Parliamentary Committee for Indian finance in 1873, had proposed quasi-representative councils that were entirely controlled by Indians to decide matters of taxation—the revenue objective, under his plan, would have been completely abandoned. By Trevelyan, these councils “would be a school for self-government for the whole of India, the largest step yet taken towards teaching its 200,000,000 of people to govern themselves which is the end and object of our connection with that country.”

Indeed, John Stuart Mill had declared British colonialism in Bengal to be “not only the purest in intention, but one of the most beneficent in act, ever known among mankind.” In the light of all that has been said about the horrors of British colonialism in Bengal throughout this paper, this claim seems not just wrong but sanctimonious. But

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31 Quoted in ibid, p. 284.
perhaps by the late nineteenth century, somewhat redeeming aspects of British
colonialism were beginning to emerge—after all, the High Court itself was ultimately a
product of colonialism.

The greatest impediment to substantive reform was, of course, Dow’s legacy.
This was not so much an intellectual legacy as an institutional one. Dow’s prescription
had been codified through Permanent Settlement and laws like the Bengal Act II of
1889—the overturning of such policies would have been essential to any attempt at true
reform. But to overturn these laws would be to fundamentally reorient the entire system
of legislation in colonial Bengal away from the advancement of revenue and zamindari
interests—a tremendously costly task. Moreover, such a reorientation would have likely
severely disturbed the stability of British power in Bengal, which had been built along the
lines of the relational contract with the zamindars. Well-defined property rights are held
as sacrosanct in economics, and ultimately Dow was motivated by a desire to better
define property rights. A superficial reading of Bengali history might even indicate that
he succeeded in this—indeed, after the passage of the Private Fisheries Protection Act
there was no more confusion or ambiguity about fishing rights.

But the analysis of the last two chapters shows that such class-based assignment
of property rights had disastrous consequences for Bengali communities and that
alternative outcomes, such as the one promoted by the High Court, were possible. What,
ultimately, is Dow’s legacy in Bengal? Famine, forcible accumulation of property rights,
the breakdown of communities, and the systematic dismantling of the institutions that
had promoted voluntary transacting and consensual negotiation in pre-colonial Bengal.
Of course, neither Dow nor Philip Francis nor Cornwallis, nor any of the other
architects of British colonial policy, foresaw or desired such an outcome—in fact, Dow’s
plan was titled “An Enquiry into the State of Bengal; With a Plan of Restoring that
Kingdom to its Former Prosperity and Splendor.” The catastrophic results were not so
much due to animus as they were due to an inadequate understanding mixed with an
eagerness to engineer a better Bengali society under British rule.
Conclusions

Contextual

This essay considers a variety of topics, and our analysis has led us to a particular picture of the fish order as it evolved through the nineteenth century. In concluding this paper, I recapitulate various aspects of this picture and draw more general conclusions. One of the strongest conclusions presented in this paper has to do with colonialism in Bengal: through the zamindari system, colonialism in Bengal distorted the incentives for zamindars to engage in cooperative and consensual re-bargaining of the fish order with the rayats. It allowed for famine, forcible expropriation, and directly led to persistent conflict and strife in rural Bengal. That colonialism is bad is not a new observation—but, our analysis has identified specific causal pathways through which a certain colonial institutional structure—the zamindari system—directly led to the disintegration of communities in rural Bengal.

My analysis of the rule developed by the Calcutta High Court works as a foil against the realities of the instituted zamindari system. The High Court developed a community-enhancing rule that called for a return to voluntary contracting. The novelty of my study of the Court’s rule is that I attempt to conduct an economic analysis in a relational setting rather than through the usual assumptions of atomistic, nameless and faceless individuals contracting in a frictionless world. As it turns out, there may be important complementarities between relational contracting and the rule developed by the Court. The existence of relational contracting systems may help in overcoming transactions costs. Moreover, the concept of Pareto-improving exchange may have a central role to play in the establishment of relational contracts. The importance of
distributional considerations and the problems they can pose for a Coasean analysis are also driven home by the backdrop of class-based governmental policy favoring the zamindars and systematic marginalization of the rayats in colonial Bengal. The High Court’s rule, by getting to the heart of how contractual relations worked in rural Bengal, could have had an unambiguously community-enhancing effect on the discordant Bengali villages. That is, by denying the arbitrary use of the criminal law, recognizing the existing norms of seasonal customary fishing, and incentivizing a consensual exchange of fishing rights from rayat to zamindar, the High Court set the stage for what could have been a period of healing for Bengali communities and development of a more robust civil society.

The first two chapters are rooted more firmly in the functioning of these Bengali communities. In both of those chapters I have illustrated ways in which economic, social, political, and cultural aspects were braided together in Bengal. I examined how various asymmetric information problems might have been overcome through the use of Maussian relational gift exchanges, shedding light on how implicit contracts such as seasonal customary fishing could have been successfully enforced. Another important element in those early chapters was the development of the Zeuthen game to show how and why the relative bargaining positions of the rayats and zamindars shifted, and elucidate the emergence of conflict. Again, the object of the analysis done throughout this paper has been to identify specific causal pathways and mechanisms and thus make the fish order intelligible. The Zeuthen game is another example of an analytic device that serves to reveal the causal mechanisms at work. The Zeuthen game analysis even led to an examination of how norms of justice and fairness naturally develop in relational systems,
and of how fundamental contradictions between these relational systems and colonial capitalism might have led to endemic moral costs in colonial Bengali society.

One natural outgrowth of this analysis is to consider the implications for post-colonial Indian government and society. We can, indeed, already see ways in which the analysis might be relevant beyond 1889. For example, Srinivas, in an ethnography of a south Indian village conducted in 1948, observes the following:

I have heard it said in Rampura that respectable people ought not to frequent the law courts. In 1948 the few who did so were unpopular and had a reputation for being very unscrupulous. This does not mean that a respectable man should never go to a law court, but he should go only after he has exhausted all other remedies. It is generally felt that it is better to settle a dispute in the village than take it to a government court. When in a moralizing mood, villagers are able to reel off the names of those who liquidated substantial fortunes in taking disputes from one law court to another. It may be mentioned that a good deal of what goes on in a law court does not make sense to villagers; they know that a clever lawyer has to be hired, and that when a man loses in a lower court he can appeal to a higher. When a man loses in a government law court it does not mean that he has done wrong or that he loses face with fellow villagers, but only that his lawyer is not clever enough or that he is not lucky. Villagers know that a man who has a right to a thing may lose it in a law court and the man who has no right may win it.¹

That the courts and laws of the state had so little relevance to village life even in a newly independent India is a striking observation. But perhaps this phenomenon can partially be explained by the tendency of the colonial state to legislate in ways that fit their arbitrary interests, and were antithetical to the needs of rural Indian society. Indeed, the

analysis done in this paper suggests that the attitude of the villagers of Rampura towards formal courts makes a lot of sense considering the institutional history of colonial India.

Additionally, contemporary fishery management can look to the historical mixed-use system for guidance on how adverse use problems can be addressed in alternative property rights regimes. Indeed, community based fishery management initiatives in contemporary Bengal, which, in many ways, draw from and resemble the seasonal customary fishing regimes of old, show promise in both increasing profitability and facilitating more responsible management of fish stock. Furthermore, such initiatives can improve the living conditions of impoverished fishermen and local farmers. While the Calcutta High Court’s rule was never realized in Bengal, the worldview that it advanced remains relevant. Perhaps it is not too late to devise alternate fishing regimes that better manage fish stocks, improve incomes from fisheries, and facilitate more consensual exchange in Bengali communities. Our analysis of how mixed-use fishing regimes operated in pre-colonial Bengal points to ways in which transactions costs and transacting problems related to contract enforcement can be overcome in these new and novel resource management regimes.

In their famous “Settler Mortality” paper, Acemoglu, Johnson, and Robinson postulate a chain of causality wherein the nature of colonial settlements impacts colonial institutions, which impact modern-day institutions, which then impact income. But how exactly do old institutions impact new ones? After all, the zamindari system and the

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3 Ibid.

inherently extractive colonial institutions that came with it were replaced throughout India in 1947 by the Constitution of India, which granted a robust set of rights to all citizens, full representation, and a fair and impartial judiciary. So what exactly persisted from colonial times, and what caused it to persist despite the efforts of the well-intentioned statesmen of a newly independent India? These are important and nontrivial questions that the method of analysis conducted in this paper can begin to answer. By looking at the operative institutional equilibria and the relevant behavioral determinants, as we have done throughout this paper, we can impose intelligibility onto the ostensibly absurd flux of institutional dynamics. A natural next step for this paper is to extend the analysis into the twentieth century and begin to examine questions of institutional persistence and change in Bengal—perhaps again through the study of the fish order or perhaps in some other way—demarcated by the advent of independence.

**General**

Among the important conclusions of this paper is that institutions matter—this is something of a mantra in institutional economics, but this paper, following Greif, provides a somewhat novel account of exactly how and why they matter. It is not just institutions that matter. Rather, a nexus of institutional, cultural, political, geographical, and technological factors working together determines the behavioral regularities in which we are interested. These behavioral regularities can be extrapolated to measurements of income and such that are of more immediate interest to many economists. While I have not proven that institutional factors matter always and everywhere, the analysis done here suggests that they do. The modalities of economic
organization were so deeply intertwined with institutional factors in colonial Bengal that it is hard to imagine any society where they are not so.

Another important general conclusion relates to the method used throughout this paper. In beginning to talk about the significance of this method, it will be useful to consider Karl Polanyi’s comments on a substantive vs. formal economics:

The substantive meaning of economic derives from man’s dependence for his living upon nature and his fellows. It refers to the interchange with his natural and social environment, in so far as this results in supplying him with the means of material want satisfaction…The formal meaning of economic derives from the logical character of the means-ends relationship, as apparent in such words as “economical” or “economizing.” It refers to a definite situation of choice, namely that between the different uses of means induced by an insufficiency of those means.5

Polanyi advocated a substantive economics, which situates economic man in the institutional, cultural, and societal context that guides his wants and determines the means of satisfying them. This kind of substantive economics, he argued, is more useful in understanding the varying structures of economic organization that are manifested throughout the history of the world than the utilitarian logic of means and ends by itself.6

But, there was a problem:

As experts are unanimous to recognize, all strivings for such a naturalistic economics remained unsuccessful. The reason is simple. No merely naturalistic concept of the economy can even approximately compete with economic analysis in explaining the mechanics of livelihood under a market system.7

7 Ibid, p. 241.
This is where the significance of the method advanced in this paper comes in.

This paper attempts to understand the causal mechanisms that guide systems of exchange and ownership. It seeks to uncover mechanisms that allow for analytic rigor while retaining the substantive image of economics. Game theory—and associated concepts like asymmetric information and credible commitment—is an immensely important analytic tool precisely because it allows economists to make progress on the problem outlined by Polanyi and begin to analyze the mechanics of behavioral regularities in society. Indeed, in order to understand change and persistence in the superstructures of economic organization it is essential to move beyond just the neoclassical problem of maximizing utility in an environment of scarcity. One needs to incorporate some understanding of the social lives of human beings in order to make sense of their motivations, and get a handle on the regularities of behavior that define the superstructures of exchange and ownership that they inhabit. This paper is an attempt to do just that, and it advances the project of a more robust institutional economics.

A conclusion of some philosophical importance comes from work done in the first two chapters. In those chapters I identify functional roles for reputational systems and ritualized gift exchanges in the overcoming of transacting problems, and even point to ways in which norms of fairness and justice might be related to the structure of relational contracting. Institutions very often solve transacting problems in economics, but “institution” generally refers to some relatively impersonal set of rules or monolithic entity. Reputational systems, ritualized gift exchanges, and all talk of fairness and justice are, however, far removed from this image of “institutions.” These are aspects of life that have great meaning, personal significance, and elicit strong emotional responses.
from many people. Our reputation, for example, may be intimately tied to how we think of ourselves and who we are—loss of reputation, after all, has led some people to suicide. By functionally tying reputational systems to transactions I have suggest that such a personal and meaningful social construct has its roots in the overcoming of transacting problems.

But, of course, “transaction” here should not be read only as the next lucrative business deal for your favorite Fortune 500 corporation. Rather, transacting took on a Maussian significance for primordial man, and this significance remains foundational to human society. To transact was not just to exchange for some chump change, rather it was to cooperate and show a commitment to keep coming to terms. Transacting involved the realization that one’s self interest often entails full cooperation with others despite all kinds of insecurities and vulnerabilities. Various institutions are socially constructed in order to maintain this state of cooperation and prevent the transacting problems—free riding, moral hazard, adverse selection, and the like—that threaten its viability. Some of these institutions, like governmental organizations or formal legal systems, may seem distant from us—headquartered perhaps in some grand old building in a far-away metropolis, sending out emissaries to correct problems as the need arises. But others, like the reputational system that developed out of ritualized gift exchanges in the Bengali fish order, take on a deeply personal significance for many people. In this way, the realization that one’s self interest often entails full cooperation with others in the presence of all kinds of insecurities and vulnerabilities becomes institutionalized through various social constructs. In the case of reputational systems and norms of fairness and justice these constructs can be central to our self-conception. To drive
home the point, the realization that self-interest entails full cooperation can, through this kind of institutionalization, become part of who we are.
Bibliography

Books, Journal Articles, and Other Miscellaneous Sources


Dow, Alexander, *The History of Hindostan from the Death of Akbar to the Complete Settlement of the Empire Under Aurungzebe* to which are Prefixed, I. A Dissertation on the Origin and Nature of Despotism in Hindostan, II. An Enquiry into the State of Bengal; With a Plan of Restoring that Kingdom to its Former Prosperity and Splendor, London: John Murray, 1792.


**Cases**


*Pierson v. Post*, 3 Cai. R. 175 (1805); 1805 N.Y. LEXIS 311.

