Chapter 4
Seizing Advantage: Strategic Moves and Power in Exchange
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“The efforts of men are utilized in two different ways: they are directed to the production or transformation of economic goods, or else to the appropriation of goods produced by others.” --Vilfredo Pareto (1905)

“. . . the executioner’s face is always well hidden.” – Bob Dylan

Suppose that after signing a limitation agreement with Boratonia, authorities in Arruba hope to induce their own farmers to limit water use, but the farmers would rather not. Alternately, the farmers as a group may hope to restrain the water use of individual members who would rather not. In either case, compliance requires an exercise of power—likely some mix of rewards and punishments. Chapter three’s discussion of the information and enforcement issues that the second-order CAPs that accompany contracting has set the stage for a formal incorporation of power into economic models.

Webster’s dictionary defines power as: “The capacity or ability to direct or influence the behavior of others or the course of events (...).” Physicists define power as the “time rate at which work is done by a force (Halliday, Resnick and Walker, 131).” A force performing work can move an object from a state of rest to motion or alter the speed or trajectory of an object already in motion. Relating physics to Webster, we may interpret the inertia or motion of an object as analogous to “the course of events” or “behavior of others.” Applying these definitions to political economy, we may regard economic or political processes as forms of rest or initial motion, courses of events, or behavior of others. Economist Kaushik Basu defines power in a manner that he says spans concepts from thinkers as diverse as Max Weber, Bertrand Russell, Fredrich Hayek, John Kenneth Galbraith, and Steven Lukes. “All agree that power is, broadly

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1 There are a great many ways to conceptualize power. This chapter does not claim to incorporate all or even a representative portion of them. It focuses on a set of concepts that inform its game-theoretic approach to CAPs and exchange.

speaking, the ability of one person to get another person to do something that is of advantage to the former but not in the latter’s interest (2000, 134).” We amend this definition slightly in order to focus on deliberate attempts with the possibility of unintended consequences.⁢ We define power as:

the ability of an agent or group to deliberately induce other agents or groups to take, alter, or avoid specific actions in a manner that the former (perhaps mistakenly) believes is in its own interest and that the latter would not otherwise pursue.

A more precise discussion of the faces or dimensions of power appears later in this section.

Power relationships permeate political economy. Obviously, at a macro level, states exercise power, and markets and states interact. But power relationships infuse micro political economy as well. As we saw in chapter 3, when asymmetric information impedes the credibility of contractual commitments, full enforcement by external agents, who lack detailed on-site information, becomes prohibitively complex. In order to circumvent post-contractual moral hazard problems, parties to exchanges, principals and agents, must then apply some kind of internal enforcement mechanism, such as contingent renewal in order to resolve attendant second-order CAPs.⁴ Accordingly, contract enforcement typically involves a mix of external and internal enforcement. At either level, enforcement connotes an exercise of power: it alters the behavior of agents away from actions (trajectories) they might otherwise take, at the behest of some other agent or group.

The use of power by the state as an external contract enforcer, often taken for granted in economic models, is nonetheless relatively straightforward in the sense of basic enforcement actions. In contexts with established legal systems, violators of contracts can be sued, fined, or

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⁢ Non-intended exercises of power are possible, but not interesting for our theoretical purposes. Exercises of power often generate unintended consequences.

⁴ More generally, commitments that go beyond cheap talk require some mechanism, either formal or informal, to police malfeasance—otherwise a commitment or contract would be meaningless.
jailed—clearly exercises of power. Yet, when one considers average citizens in average transactions, the implicit, often subtle, nature of these sanctions too often obscures the importance of external enforcement mechanisms. The more subtle exercises of power via internal contract-enforcement mechanisms is equally implied by principal-agent and related models of asymmetric information. These exercises of power not only underlie potential resolution of second-order CAPs, they facilitate all but the simplest exchanges. This positive role of power is often overlooked. These arguments have then set the stage for a formal incorporation of power into economic models.

Another frequently overlooked implication of contracting under asymmetric information is that processes of growth and distribution are inseparable. Growth requires exchange, exchange requires contracts. Due to information asymmetries, contracts require (some) internal enforcement—exercises of power between or among exchanging parties. Naturally, we expect self-interested parties who exercise power in exchanges to steer distribution in their direction.\textsuperscript{5} Economics thus becomes political even at the micro level. Consequently, the economic growth that emerges from exchange processes cannot be separated from the distributional goals that accompany the exercise of power in exchange. Indeed, in the process of facilitating resolution to second-order CAPs of contracting, power binds growth to distribution.\textsuperscript{6}

Why then is power so rarely discussed in traditional economics? Basu provides a simple historical answer. Until quite recently, economists simply lacked the conceptual tools to formally address power: “... given the importance attached to formalization in economics, the only

\textsuperscript{5} Insert quote from Smith on the trades.
\textsuperscript{6} In chapter 13, we will discuss Acemoglu, Johnson and Robinson’s macro-level approach to the function of power in linking distribution to growth (2004). The game-theoretic concept of commitment underlies both arguments.
effective option has been to ignore them [power and coercion] (2000, 132).”\textsuperscript{7} Fortunately, game theory with information economics now offers us a formal methodology for analyzing power. In this text, such formalization will begin with a discussion of the traditional concept of economic competition.

\textit{Competition, Markets and Power}

In pure competition theory, power plays no role. Given its assumptions, no individual agent can influence market outcomes for another; hence there is no scope for exercises of power within exchange. Here are the basic assumptions:

1. Consumers maximize utility and firms maximize profits. Both are “rational” in the sense that they focus on only individual material gains and possess the cognitive capacity to maximize.\textsuperscript{8}
2. There are many buyers and sellers in every market—enough so that no agent can influence the market price.
3. All goods and services exchanged are identical (homogeneous).
4. Every agent has full and equal access to relevant information for making market decisions at no cost. Information is thus a non-economic good rather than a scarce resource.
5. Agents may enter and exit any market freely; there are no barriers to entry or exit to any market.

Assumption 1 guarantees that agents cannot manipulate the goals (preferences) of other agents. Given 1, assumptions 2-5 guarantee that no individual agent has the ability to influence any market outcome for any other. More precisely, assumptions 2, 3 and 5 guarantee a sufficient number of potential competitors to undercut possible exercises of market power, while assumption 4 guarantees that all parties know enough to engage in such competition. Absent an ability to influence outcomes for others, market participants cannot exert power. The next two paragraphs elaborate.

\textsuperscript{7} The prior conceptual approach echoes the story of the drunk looking for his keys under a streetlight. A passing police officer asks: “Where did you lose your keys?” The drunk replies, pointing: “Over there.” “Then why are you looking here?” “Because this is where the light is.”
\textsuperscript{8} Chapters 5 and 6 will more fully address the concept of rationality that underlies assumption 1, along with alternative conceptions.
In conventional price theory, where contract enforcement is largely taken for granted, power enters only as the market power that accompanies imperfect competition.\(^9\)

*Market power* connotes an ability by a firm, group, or agent to influence prices. Monopolies, oligopolies and monopolistic competitors may influence prices because product heterogeneity or entry barriers (violations of assumptions 3 and 5) limit potential competitors’ access to the market. Indeed, for Adam Smith a core virtue of market competition is its ability to undermine such influence (1776, .). An attempt to raise one’s price above a market-clearing level will lead well informed profit-maximizing competitors, who enter the relevant market costlessly, to charge less. Market power collapses. Accordingly, Abba Lerner states that “An economic transaction is a solved political problem (1972, 259).\(^{10}\)” Recent theoretical developments have, however, rendered this opinion and its underlying assumptions obsolete.

Assumptions 4 and 5 are particularly important and problematic. Perfect information (4) requires that all relevant characteristics of potentially exchanged goods and services be fully transparent to all involved parties. In real world exchanges, a fruit market may approximate these stringent conditions.\(^{11}\) As prior discussion indicates, however, exchanges of labor services or complex commodities like health insurance or mortgage contracts do not remotely meet these conditions. The analytical problem with the perfect-information assumption, however, is not its blatant unrealism, but its erroneous implications on market clearing and power. In chapter 3, we saw that asymmetric information creates enforcement problems that prevent markets from clearing. Because enforcement typically involves power and non-clearing markets indicate that at

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\(^9\) By traditional, I mean Walrasian approach or pure competition or near pure competition approach used in many undergraduate theory classes.

\(^{10}\) Applying this logic to labor markets, where some argue that capital exerts power over labor, Paul Samuelson says, “. . . in a perfectly competitive market it does not matter who hires whom; so have labor hire capital. (1957, 894.)”

\(^{11}\) Even there, most of us have probably been disappointed by occasional purchases of bad-tasting apples.
least some agents can influence market outcomes, asymmetric information opens the door for exercises of power within exchange processes.

Likewise, assumption 5 stipulates that parties may enter or leave exchange relationships without experiencing any loss of value. If so, the value of the option chosen equals that of the next-best alternative, and entry or exit occur without consequence. Absent consequence the exertion of power would be meaningless. For example, if free exit were to apply to the Nash bargaining model (see equation 2-2 or next section), bargained outcomes would generate value equal to next-best alternatives (or fallback positions). Absent an ability to influence the value of outcomes, neither party could exert power over the other.¹² Lerner’s political problem would be, as it were, “solved.” The presence of costs of entry and exit—virtually ubiquitous in contract relationships—however, drives a wedge between negotiated outcomes and fallback alternatives. The exercise of power enters. Indeed, we expect self-interested agents to seize relevant opportunities in the pursuit of their own gain. For example, in most employment relationships, losing one’s job is costly (else unemployment would not be a persistent topic of political debate). Employers may then exert power in the sense of getting workers to do what they might not otherwise do, such as put forth additional effort (as in Figure 3-6), thereby altering the trajectories of employee action.

Sources, Instruments, Domains, and Three Faces of Power

To proceed, we employ the three-dimensional or three-face approach to power initially developed theoretically by Steven Lukes (1974) and empirically by John Gaventa (1980). Lukes’ approach allows us to distinguish among broad domains over which power can be exerted in a way that lends itself to game-theoretic representation traditional bargaining, resolution of

¹² More technically, if the fallbacks equal bargained payoffs \( d_i = x_i \) there is no role for bargaining power. Yet whenever \( x_i > d_i \), at least one agent suffers losses from leaving an agreement; bargaining power enters. comment on internal and external fallbacks and cite relevant article.
second-order CAPs, and ultimately, as chapters 7-9 will indicate, interactions between internal enforcement, external enforcement, institutions, and development.

To place this discussion in context, we use Robert Dahl’s (1957) distinctions among three elements (not faces) of power relations. First, the base or source of power indicates where the power of some party (A) comes from. For example, A may hold a particular position, a seat in the US Senate, have access to specific resources, such as a campaign fund, or be able to mobilize support for its position, perhaps by turning out voters. Here we argue that ultimately, power arises from four often related sources: position (social, political, or economic), access to resources, an ability to resolve CAPs associated with mobilizing support. These three sources may well reinforce each other: parties in certain positions may have access to certain resources which in turn may facilitate resolving CAPs. Alternately, resolving CAPs or access to resources may enable someone to attain a position. Second, the means or instruments of power indicate the manner through which some party (A) exercises power over some other party (B). For example, A may threaten B. Ultimately instruments of power relate to actual or implied sanctions, positive or negative. Indeed, Bowles and Gintis (1993, 2008) argue that the use of direct or threatened sanctions is the defining characteristic of power relations. This is a statement about instruments: relations that do not involve the instruments of power are not power relations.

The third element of power, domain of influence, distinguishes Lukes’ three dimensions. The range, scope, or what we call power’s domain of influence indicates broad spheres of activity that power affects. Broadly speaking, there are three fundamental domains of influence:

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13 This concept should not be confused with Charles Lindbloom’s (1957) concept of instrumental power.
14 They contend that Dahl’s (1957, 202-203) often cited definition of power—“A has power over B to the extent that he can get B to do something that B would not otherwise do”—is too broad. It includes non-strategic effects, such as the impact of a purchase of bread on an unknown wheat farmer, as well as non-power forms of influence such as pure non-self interested persuasion (Bowles and Gintis, 2008, 4-5).
i) A’s power may alter B’s behavior, such as how a Senator votes; ii) A’s power may permit, deny, or alter B’s access to or participation in various decision-making bodies, such as the US Senate; iii) A’s power can alter own B’s preferences concerning related activities, such as its desire to challenge A in an election. Drawing these distinctions more precisely, exercises of power by A to induce B to take or avoid actions that it would not otherwise pursue or avoid may thus operate over one or more of these domains of influence:

i) A could directly impact B’s behavior within a given context or arena;

ii) A could alter rules of access to or participation in relevant arenas, alter perceptions of other parties concerning the legitimacy of B’s participation, or by influence B’s expectations concerning possible reactions of others—all in order to bias procedures against B.

iii) A could alter own B’s preferences concerning the desirability of undertaking certain actions or B’s beliefs regarding their feasibility or A’s role.

This triad of influence—behavior, rules/expectations, and preference/belief—indicates the core elements of the three-dimensional approach.15

Table 4.1 summarizes the elements of power, indicating the three faces in the domain column. Thus, while all three faces share similar sources and instruments (with some distinctions concerning precise manifestations), it is the domain of influence that distinguishes them. We now turn to more precise discussion of the three faces (domains, dimensions) of power.

The first face of power (power1) has the narrowest and most easily observed domain of influence. Power1 reflects a party’s ability to directly affect behavior related to observable decisions, made within established arenas with given and understood rules. Power1 takes the

| Table 4.1: Elements of Power Relations: |
|---|---|---|
| Sources | Instruments | Domain |
| position; access to resources; resolution of CAPs; | negative and positive sanctions | i) behavior ii) rules/expectations iii)preferences/beliefs |

15 Note that these distinctions represent regions of a spectrum rather than fully distinct categories.
institutional foundations that shape various parties’ access to and ability to participate in decision arenas as given and known. Exercises of power\textsubscript{1} can be observed by examining which parties prevail in contested decisions. Concerning sources, Lukes (1974) states that possession of power\textsubscript{1} depends on the ability of parties to mobilize support using traditional political means such as assembling coalitions, lobbying, and garnering votes—in our terminology, an ability to solve relevant CAPs.\textsuperscript{16} Access to economic resources, moreover, may facilitate such mobilization. In terms of instruments, power\textsubscript{1} utilizes well-understood and observable rewards and punishments that are already implicit in the established context. For example, in a traditional labor negotiation, both parties know that a union has some ability to call a strike and likewise a company has some ability continue operating in the face of a strike.

Lukes links power\textsubscript{1} to the pluralist tradition of Robert Dahl (1961) and Nelson Polsby (1963), though he allows that a non-pluralist interpretation of power\textsubscript{1} is possible. Summarizing Lukes’ argument, Gaventa (1980) identifies two assumptions that accompany power\textsubscript{1}: 1) relevant parties can participate in decision forums (arenas) and, 2) parties know and can articulate their interests. Accordingly, for pluralists leaders speak for their constituents, and non-participation among constituents reflects voluntary choice along with contentment with the status quo. The rules of access are unbiased in the sense that all potentially concerned parties can participate. Open access leads to competitive power where opposing interests counteract disproportionate influence and latent groups will (spontaneously) mobilize when their interests are threatened. Effectively there is a negative-

\textsuperscript{16} Lukes states that the first face of power is measured by its exercise.
feedback mechanism whereby excessive influence from one party energizes actual or potential opponents ultimately limiting its impact.\textsuperscript{17}

Our discussion, however, does not bind the examination of power\textsubscript{1} to pluralist assumptions of open access. A non-pluralist conception of power\textsubscript{1} recognizes that institutionally determined (or influenced) positions in society, governing bodies, or markets differentially influence the ability of various parties to exercise power\textsubscript{1}. A senior Senator, for example, possesses means of affecting legislation (e.g., connections, seats on influential committees) that are not available to new members, much less average citizens. An employer has more access to productive resources and decision arenas regarding employment than an average employee. Lenders have more access to finance than borrowers. However equally or unequally such positions allocate access, our concept of power\textsubscript{1} takes them as given and proceeds to examine how exercises of power\textsubscript{1} influence outcomes within such fixed contexts.

The second dimension of power (power\textsubscript{2}), on the other hand, treats rules and corresponding positions and access as manipulatable. Power\textsubscript{2} violates Gaventa’s assumption 1): now parties may use power in order to impede the others’ ability to effectively participate in making decision-making arenas. Accordingly, exercise of power\textsubscript{2} reflects a “mobilization of bias” (Bacharach and Baratz (1962, 1970)).\textsuperscript{18} Party A acts either directly or indirectly to limit or preclude B’s participation. Directly, A may immediately apply force, as in political assassination or military invasion.\textsuperscript{19} It may threaten to punish B’s participation, or promise to reward non-participation. The latter may be considered “buying off” potential opponents.

\begin{itemize}
\item \textsuperscript{17} As in Adam Smith, self-interested opponents undermine undue exertion of power, though not enough to entirely eliminate power in the political sphere.
\item \textsuperscript{18} The concept of mobilizing bias was initially developed by E.E. Schattschneider (1960) as a critique of pluralism. Citing Schattschneider, Bacharach and Baratz (1962) use it at the foundation of their second face of power.
\item \textsuperscript{19} Specific acts, such as military invasion, may represent exercises of power 1 or 2, depending on the question at hand. If the decision arena is a war, invasion likely constitutes exercise of power\textsubscript{1}. On the other hand, if the decision arena is international negotiation over use of resources, invasion may well represent an exercise of power\textsubscript{2}.
\end{itemize}
Indirectly, A may design or influence rules of access or participation against B. The framers of the US Constitution, for example, limited the vote to non-slave male property holders. Furthermore, party A may marginalize B by influencing beliefs of other parties (Cs) concerning the credibility or legitimacy of statements or actions from B.\textsuperscript{20} A could use the media or other forms of communication to appeal to cultural values, symbols, or labels. Such manipulations, moreover, may influence B’s own expectations concerning reactions of others (A and C). For example, in the late 1940s and early 1950s Senator Joseph McCarthy effectively silenced potential opponents by labeling them as communists or sympathizers and by implicitly threatening many others with the same. In anticipation of ostracism or job loss, many potential challengers to Senator McCarthy remained silent.

As indicated, at a broad level, power’s ultimate sources and instruments do not distinguish power\textsubscript{2} from power\textsubscript{1}. Manifestations, however, can differ. For example, an ability to alter rules (power\textsubscript{2}) is often tied to specific social, political, or economic positions. Moreover, to the degree that exercises of power\textsubscript{2} influence perceptions of Cs and/or expectations of B, these changes in beliefs become a new (derived) source of power (1 or 2) for A.\textsuperscript{21} Concerning instruments, both power 1 and 2 employ direct or implied rewards and promises, but accompanying ends and contexts differ. Power\textsubscript{1} involves already available and understood direct sanctions within established arenas, such as military or physical force, or the political “force” of mass or voter mobilization, all directed towards behavior within understood, observable, and established contexts. For power\textsubscript{2}, direct sanctions may impede or prevent access to arenas (alter rules). Likewise, direct or threatened sanctions that are not already understood from the existing context signify use of power\textsubscript{2}. Indeed manipulation of

\textsuperscript{20} Section 3 will develop the importance of such triadic power relations.

\textsuperscript{21} As we will see in Section 2, the game-theoretic concept of a strategic move alters expectations in one’s favor. Brinkmanship systematically seeks to use altered expectations as sources of additional power.
threats and promises constitute critical exercises of power. It is important to note that the presence of asymmetric information, arguably close to ubiquitous in social, political and economic encounters, invites opportunities for exercises of power. Normally, then, we should expect powers 1 and 2 to be used in combination.

Finally, we note that because the exercise of power involves strategic manipulation of access, incidents of non-participation of certain agents or groups may reflect exercises of power by others rather than voluntary choice. Because a lack of participation by concerned parties can prevent decision-making bodies from even addressing existing grievances, decisions that might have occurred absent power, simply do not occur. In such cases, pluralist voluntarism along with political competition collapse. Even so, while exercises of power may bias processes or opinions against it, party B still knows that A holds power and still desires to challenge A. Conflict is still observable as are interests of the relevant parties (Lukes, 23-24).

The third and yet more hidden face of power (power), extends its domain beyond observable conflict to manipulation of preferences and beliefs, violating assumption 2. A exerts power over B by “shaping or determining his very wants (Lukes, 27)” in order to diminish or eliminate B’s will to challenge A. Within power, there are four relevant sub-domains of influence:

i) immediate preferences: induce B to believe that it does not desire change or participation

ii) conceptions of appropriateness of action: B desires participation, but believes it “should not” act upon its desire

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22 Relevant grievances never reach decision agendas. Chapter 12 will discuss relations between agendas and policies. Empirically Gaventa argues that researchers of power should look for observable grievances in order to identify observable non-decisions (1980, 15).

23 Ralph Milliband’s concept of “engineering of consent” is similar to power (1969, 180-2).
iii) deep-seated beliefs concerning own ability to influence: B may desire change and want to act but suffer from an internalized sense of powerlessness.

iv) beliefs concerning how to effect change: B believes it could influence outcomes but does not know what to do or has mistaken ideas on strategy, as in failing to understand A’s role—going after the wrong target (Gaventa, 1980, 15-20).

Here is an example which may be applied to each of these four cases. Party A abuses B in some kind of relationship. For i), B believes that he “deserves it.” B does not even want recourse. B has fully acquiesced to A’s power. For ii), B does not think that he as an individual deserves abuse, but believes that one in B’s position should not challenge someone in A’s position. B’s acquiescence here reflects a sense of propriety. For iii), B would like recourse, but believes it is completely hopeless; B feels trapped. B’s acquiescence reflects beliefs on strategic context. For iv), B wants recourse and is willing to act but does not know what action to take, believes that some ultimately ineffective action will help, or takes action on someone other than A. B is not acquiescent per se, but still cannot influence A’s power because of his beliefs. To the degree that A (or some coalition of similar agents) induces any of these beliefs, it exerts power 3 over B.

Combining these ideas, Gaventa argues that power 1, 2 and 3 interact and reinforce each other, and furthermore power grows cumulatively as its exercise moves up the numbers (from 1 to 2 to 3). If B consistently loses in exercises of power 1, A may exercise power 2, devoting resources to biasing rules or expectations against B’s participation, diminishing B’s subsequent access. Persistent bias against B’s participation may then allow A to manipulate B’s conceptions of the feasibility, appropriateness, or desirability of participation, power 3. Party A may invoke cultural symbols and notions of legitimacy, to influence B’s beliefs in its favor. Subsequently, B

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24 Gaventa distinguishes this notion from a power 2-induced fear of A’s reaction as follows: “... over time, the calculated withdrawal by B may lead to an unconscious pattern of withdrawal, maintained not by fear of power of A but by a sense of powerless within B regardless of A’s condition. Power 3, moreover, can be related to endogenous preferences, social norms and Akerlof and Kranton’s (2000) concept of identity. Chapter 8 will address these.

25 Note that if “society at large” rather than a coalition is the source of bias here, it is not obvious who exercises power or how they do it. Digeser (1992) refers to the undirected power that emerges from prior history, as the fourth face of power. We will not develop the fourth face here.
may not even try to enter arenas, much less exercise power\textsubscript{1} within them; the conflict disappears. A’s power over B thus grows cumulatively, exhibiting properties of path-dependency. Once A can exercise power\textsubscript{2}, A’s power attains some inertia, and exercising power\textsubscript{3} increases such inertia.\textsuperscript{26} “The most effective and insidious use of power is to prevent such conflict from arising in the first place (Lukes, 27).” On the other hand, challenges to A’s power typically reverse this process and work cumulatively in the opposite direction. If B can undo A’s power\textsubscript{3} by changing its beliefs or “develops consciousness of the needs, possibilities, and strategies of challenge,” it demands access to arenas (Gaventa, …). If B then gains access (undoing A’s power\textsubscript{2}), it can participate in power\textsubscript{1} bargaining.

Two remaining points: First, while in a sense power\textsubscript{1} appears weakest, it is critical for understanding the determination of outcomes among relevant participants within established decision arenas.\textsuperscript{27} Second, note the informational aspects of the three dimensions of power. In power\textsubscript{1}, all is understood or observable by both A and B. Power\textsubscript{2} introduces some information asymmetry. B may not observe some of A’s actions; B may not know how A biases access or participation. Even so, B is cognizant of its conflict with A, understands that A holds power, and has some conception of how change could come about even if access is denied. Power\textsubscript{3} extends the realms of asymmetric information. B is either not aware of how to initiate change, not aware that A holds power, or is not even aware that a conflict of interest exists.\textsuperscript{28} Table 4.1 summarizes key elements of power.

\textsuperscript{26} The presence of power\textsubscript{2} and power\textsubscript{3} generates punctuated equilibria with respect to policy; more in chapter 12.
\textsuperscript{27} Chapters 12 and 13 will relate power\textsubscript{1} and power\textsubscript{2} respectively to concepts of de facto and de jure power.
\textsuperscript{28} This final condition poses considerable challenges for empirical social scientists. Lukes notes that power 1 and 2 both identify interest with preferences or wants (though differ concerning whether participation is required to identify wants). For power\textsubscript{3}, “wants may themselves be a product of a system which works against their interests, and, in such cases, relates the latter to what they would want and prefer, were they able to make the choice (38).” Identifying such conditional wants is empirically difficult. Matthew Crenson (1971) offers insight: “Local political forms and practices may even inhibit citizens’ ability to transform some diffuse discontent into an explicit demand
These concepts can be modeled game theoretically. Power\textsubscript{1} lends itself to simple bargaining games with relevant parties “at the table,” taking the rules of the game for granted. Accordingly, section 1 discusses a Nash cooperative bargaining model with given fallback positions, and relates the model to sources and exercises of power\textsubscript{1}. One can represent power\textsubscript{2} using the game-theoretic concept of strategic moves. Section 2 defines strategic moves and relates them to power\textsubscript{2}, noting the importance of credibility. Section 3 develops power\textsubscript{2} more fully, linking it to Basu’s (2000) concept of triadic power relationships. It then extends themes from chapter 3 to exercises of power within exchange processes, indicating influence on distribution. Section 3 closes by discussing A’s ability to influence B’s relationships with many

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Legend: T&P = threats and promises; pref = preferences; w/ = with

(23)” (Cited in Lukes, 47). Without explicit demands, power\textsubscript{3}’s grievances are not observable, yet power\textsubscript{1} may be exercised. Gaventa makes a contribution by observing changes in behavior and preference of coal miners over time.
C’s via manipulation of the latter’s perceptions of B, moving in the direction of power_3_. Power_3_ ultimately reflects properties of endogenous preference formation, impacts of social norms and conceptions of identity. Full discussion of these ideas awaits chapters 6-8. In the meantime, section 4 presents Basu’s model of the post-totalitarian state, suggesting power_3_. Section 5 concludes linking the three faces back to CAPs, distribution and growth, noting that use of power in the resolution of second-order CAPs indicates that distributional conflict underlies growth.

**Section 1: the first face of power and the Nash Cooperative Bargaining Model**

The Nash cooperative bargaining model, with fixed rules, offers a succinct representation of power_1_. With it, we can illustrate the impact of various sources of power on relative bargaining strength and ultimately bargaining outcomes for fixed contexts. Applications of this model are quite broad. It sheds light on any circumstance where parties gain from some kind of cooperative act or joint decision and where the distribution of gain is not pre-determined. To mention a non-economic example, two politicians may know that both would benefit from a cooperative agreement, but the precise terms of agreement influence their relative gains, such as who gets more credit for success, whose district gets more jobs, etc. A need for such cooperation permeates social, political, and economic relationships.

In utilizing a Nash cooperative bargaining game to model exercises of power_1_, we take the rules of the game, notably the determination of each party’s fallback position, as given. Chapter 2 has indicated that the Nash cooperative bargaining model can apply in situations where parties stand to gain by entering complete, fully enforceable agreements. Here is a

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29 Gaventa states, “In the first-dimensional approach . . . power may be understood primarily by looking at who prevails in bargaining over the resolution of key issues (1980, 13-14).”

30 Recall a fallback position indicates a payoff in the absence of an agreement. Page 21 offers a full definition of rules of the game. Section 2 considers manipulations of fallback positions in the Nash model as strategic moves.
somewhat more detailed description of the basic model, with zero transaction costs to bargaining.

As stated in chapter 3, the parties maximize the product of their net gains from bargaining:

\[(4-1) \quad (x_A - d_A)\alpha (x_B - d_B)\beta,\]

where \(x_i\) indicates each party’s payoff, \(d_i\) indicates each party’s fallback position, and exponents \(\alpha\) and \(\beta\) indicate the *bargaining strength* of each party; \(\alpha + \beta = 1\). The ratio of the net gains from bargaining (surplus ratio) depends on ratio \(\alpha/\beta\). Maximization is subject to the constraint that \(x_1 + y_1 = v\), where \(v\), the maximum value of the joint bargained outcome, is (for simplicity) assumed constant.\(^3\)

Figure 4-1 depicts the model graphically. Note several properties of this diagram. The segment vv, known as the efficiency frontier, indicates all possible efficient combinations of (non-negative) payoffs, reflecting the outcome constraint \(x_A + x_B = v\). Values \(d_A\) and \(d_B\) represent the fallback positions of each party, and point P maps them. Assuming that neither party would accept an outcome below its fallback position, the range of all possible bargaining occurs in the triangle PRS. Note that any point within PRS to the right or above P indicates improvement for at least one party. Efficient bargaining, where no total value is lost, occurs along the segment RS. The model, then, reflects the potential for

\[^3\text{Nash assumed equal bargaining strengths (}\alpha = \beta = 1/2\text{). By contrast, we treat } \alpha \text{ and } \beta \text{ as independent variables.}\]
mutual gain as well as the distributional conflicts that accompany bargaining processes. As such, it facilitates broad application to political and economic processes. Here point Q, at values \((x_A, x_B)\), indicates the payoffs that arise from negotiated agreement for given values \(d_A, d_B, \alpha\) and \(\beta\). Note further that that the slope of segment PQ shows the relative shares of the bargaining surplus \((x_B - d_B)/(x_A - d_A)\). This surplus ratio, in turn, is equal to and, more importantly, is determined by the ratio of bargaining strengths of the two parties \((\alpha/\beta)\); \(\alpha/\beta\) also influences ratio \(x_A/x_B\).

There are two ways to evaluate relative bargaining success: shares of total value \((x_A/x_B)\), and shares of the surplus \((x_A-d_A)/(x_B-d_B)\). As indicated, these depend on \(d_A, d_B, \alpha/\beta\). Fallbacks \(d_A\) and \(d_B\) determine the position of segment PQ. A lower \(d_A\) would shift PQ to the right, reducing \(x_A/x_B\). For power\(_1\), we take \(d_A\) and \(d_B\) as exogenous. Now for a given P, \(\alpha/\beta\) determines \(x_A/x_B\). In other words relative bargaining strength determines the distribution of the surplus. If \(\alpha\) were to decrease, PQ would pivot to the right (on P). Both \(x_A/x_B\) and \((x_A-d_A)/(x_B-d_B)\) would fall.

We now apply four sources of power\(_1\) to the model. Prior discussion has indicated that access to resources and ability to resolve CAPs associated with mobilization constitute core sources of power\(_1\), including power\(_1\). To elaborate slightly, concerning access to resources, Gaventa (1980) suggests that an ability to offer jobs influences power\(_1\) bargaining. Similarly, Bacharach and Lawler (1981) argue that the bargaining power of A arises from B’s dependence on A. Relative dependence often arises from differential access to resources. Returning to the model, if at a point in time, Party A has more access to pre-existing resources than B, then we expect \(d_A > d_B\). For example, referring to the opening of chapter 2, suppose that communities A and B may negotiate a binding agreement concerning their respective contributions to a joint well. If A has more surface water within its boundaries, A would fare better than B in the
absence of agreement. Relating this argument to dependence, we could say that B is more dependent on A’s cooperation than A is on B. Hence A can tilt $x_A/x_B$ in its favor.

Concerning collective action, Lukes (1974) argues that power arises from the ability of agents to mobilize support. Because mobilization constitutes a public good among potential beneficiaries, first- and second-order CAPs from chapters 2 and 3 apply. Turning to bargaining strength, collective action may influence a party’s choice of strategy or its ability to exert force. Suppose that for each community, the level of public support for a designated bargaining team determines the ability of that team to bargain hard and that hard bargainers achieve better outcomes. If party A can more easily resolve the associated CAPs, it ends up with the greater bargaining strength. In Figure 4-1, $\alpha/\beta > 1$ and A receives a greater share of the bargaining surplus: $(x_A - d_A) > (x_B - d_B)$.

Note further that the concept of collective action here allows us to translate the two-player framework of A and B to a multi-player framework where B (or A) may constitute a group that operates more or less coherently depending upon its ability to resolve CAPs. If group B cannot resolve CAPs at all, A is at liberty to exercise power over each member individually—divide and conquer. By contrast if B resolves its CAPs, A faces a unified B that may possess considerable bargaining strength. One can derive intermediate cases.

Two additional and (largely) derivative sources of power concern possible first-mover advantage, and patience. Each of these often emerges from one’s position in decision-making arenas, (party A might chair a meeting), or exchange processes (one party may traditionally extend offers). Non-cooperative bargaining games with complete information offer insight into potential for first moves and relative patience of the parties to influence bargaining strength.

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32 Access to resources and ability to resolve CAPs influence both positions in games and patience. As a rule, those with more resources can choose when to move and usually have more patience. Interactions among these various sources are possible.
Dixit, Skeath and Riley (2009, 703-714) present an intuitive description of an alternative offers bargaining model derived from Rubenstein (1986). A fan arrives at a football game with no ticket and a scalper is there ready to sell one. Each quarter of the game is worth $25 to the fan and this is common knowledge. Before the game, the scalper offers a price. If the fan rejects the offer, she waits out the first quarter and then makes a counter offer. If the scalper rejects that offer, the fan waits out the second quarter. The scalper then makes another offer before the third quarter. Again, if the fan refuses, she waits and makes a final offer before the fourth quarter. With no discounting, the backwards-induction solution is simple. The fan knows the ticket is worthless at the end of the 4th quarter, and so offers the scalper one cent. Knowing he will get virtually nothing at the 4th quarter, the scalper offers to sell a ticket at the beginning of the third quarter for $25, knowing the fan would pay. Before the second quarter, the fan offers the scalper $25 (and one cent). Before the game, the scalper offers to sell a ticket for $50 and the fan accepts.

More generally, consider an alternating offer game that lasts \( n \) periods. Party A makes the first, third, fifth . . . offers and B makes the second, fourth, sixth . . . offers. If the total number of periods \( (n) \) is an even number, B makes the last offer (right before period \( n \)), giving A essentially nothing, and keeping value \( x_n \). In next-to-last period A offers to keep value \( x_{n-1} \), leaving B with value \( x_n \).\(^{33}\) Offers proceed in this fashion back to the first offer. Ultimately, A ends up with values \((x_1, x_3, x_5, \ldots, x_{n-1})\) and B gets values \((x_2, x_4, x_6, x_n)\). As an exercise, the reader is asked to consider an odd number of periods.

\(^{33}\) In the football example, the scalper’s ticket price of $25 is \( x_{n-1} \) and the fan’s value of watching the last quarter (also $25) is \( x_n \), so both keep $25 of a $50 value.
If we add impatience to this model, bargaining strength emerges from first-mover advantage and greater patience. To simplify, suppose that both A and B can split $1. Assume fallbacks are zero for both. The first mover can offer \((1-x)\) to the other, keeping \(x\). If that offer is refused, the second mover can offer the same. Now assume that A moves first and that both discount the future at rate \(r = 0.05\). The present value of payment \(x\) received one period in the future is thus \(0.952x\). Party A knows that if B refuses its offer, B can make an identical offer in the next period. A therefore offers B \(0.952x\) and keeps \(1-0.952x\). Thus \(x = 1 - 0.952x = 0.512 > 0.50\). Party A has a first-mover advantage. Note that discount rates measure impatience; the more impatient a party, the more it discounts future values. Now, if A is more patient than B (suppose \(r_A = 0.05\) and \(r_B = 0.10\)) A’s advantage increases. Intuition: because B values future payoffs less than A, at any move, A can offer B less than B would have to offer A at the same point in time. Returning to Figure 4-1, the ratio of bargaining strength, \(\alpha/\beta\), increases if either A is the first-mover or if the impatience ratio \(r_B/r_A\) rises. Formal proof is left to the reader as an exercise.

Returning to the general concept of power\(_1\): Within a fixed decision area where relevant parties have access and fallbacks are given, exercises of power\(_1\) influence the share of total value gained by each party \((x_A/x_B)\) as well as its share of the surplus \(((x_A-d_A)/(x_B-d_B))\). Access to position or preexisting resources determines each party’s (given but still relevant) fallback position and facilitates resolution of CAPs. For given fallbacks, the ability to resolve CAPs, potential advantages from the order of moves, and relative patience all influence the relative bargaining strength \(\alpha/\beta\).

Power\(_1\) influences outcomes in given and well-understood arenas. But these conditions are relatively rare in both economic and political spheres. Thus applications of power\(_1\) alone are somewhat limited. In situations where the rules that condition access or behavior are malleable,

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34 Again, I paraphrase description from DSR (2009, …)
or when understandings of the arenas or the actions of possible players are uncertain and asymmetrically distributed, then parties are likely to exercise power\textsubscript{2}. To secure advantages in exercise of power\textsubscript{1}, they may consciously manipulate the “rules of the game,” including expectations concerning its conduct. In such cases the exercise of power\textsubscript{2} conditions the exercise of power\textsubscript{1}. We now turn to that topic.

**Section 2: Power\textsubscript{2} and Strategic Moves with Two Parties**

Just as the Nash bargaining game illustrates exercises of power\textsubscript{1}, the game-theoretic concept of strategic moves illustrates exercises of power\textsubscript{2}. Strategic moves (full definition below) represent attempts to alter the “rules of the game”—the terms of engagement in the decision arenas that power\textsubscript{1} takes as fixed. This section offers background theory on the concept of strategic moves, applying it to exercises of power\textsubscript{2} within paired interactions between parties (agents or unified groups) A and B. As such it does not completely illustrate the full range of power\textsubscript{2}. In particular it misses the use of power\textsubscript{2} to influence opinions of outside parties (C) who may interact with A or B. Section 3 will address this complication. (add a bit more of a thesis)

For Peter Bacharach and Morton Baratz the exercise of power\textsubscript{2} involves deliberate attempts to thwart “manifest challenges to the values or interests of the decision maker.” Here, an agent (party A) may utilize:

\[
\text{A set of predominant values, beliefs, rituals, and institutional procedures (‘rules of the game’) that operate systematically and consistently to the benefit of certain persons and groups at the expense of others (1970, 43).}
\]

Accordingly, we represent power\textsubscript{2} game-theoretically with the concept of strategic moves. A strategic move is an attempt, prior to or during the execution of a game, to alter the rules of the game to one’s favor. One may envision a strategic move as a “pre-game” which alters the rules of a subsequent game, or one may consider it to be the first (or an early) move in a game that
allows such manipulation. Recall that the *rules of a game* indicate the following: who plays and who does not; strategies available for each player; the timing and order of moves; all payoffs; and what each player knows or does not know upon entering the game and at every point where it has a move.

Player A, for example, may prefer playing against B to playing against C or D. If A can manipulate rules to exclude C and D, it exercises power. Similarly, A may do well against B as long as B cannot employ certain strategies or does not know certain things. For example, the US wants to keep nuclear technology out of the hands of Iran. By employing sanctions and other strategies, the US hopes to shift future power games with Iran to US advantage by denying Iran the potential to employ a nuclear strategy. More generally, manipulation of any of these parameters that we call rules may thus bias a subsequent game (or a later stage of an existing game), indicating power. As with power sources of power often reside in a party’s position, access to resources and an ability to resolve CAPs. But here resources are deployed to alter the rules of participation in an arena (in one’s favor) rather than being confined to altering behavior within a fixed arena. Note further that institutionally-derived or conditioned positions influence one’s access to sources of power. For example a committee chair in the House of Representatives may be in a position to alter the rules of committee hearings. More junior members would face considerable CAPs in opposing the Chair’s decisions.

Unless executed in secret (example below), strategic moves involve attempts to alter the expectations of other players regarding conduct in a subsequent move or game. By making a strategic move, party A tries to alter B’s expectations concerning A’s own subsequent behavior,

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35 The college slang associated with the term “pre-game” – drinking before a social event – actually fits the concept of a strategic move quite well.
or the behavior of other parties (Cs).\textsuperscript{36} In the former case, a strategic move requires making a credible commitment to alter one’s future behavior away from what otherwise would have been expected. Put differently, one effectively ties one’s own hands or arranges to have them tied (Schelling, 1960). Else, one would just play the game as it would have been played without a strategic move.\textsuperscript{37} Here, we distinguish credible statements from mere cheap talk. A \textit{credible} statement by party A is one that other players \textit{expect} A to follow through with at every point where it may be called upon to do so, even when the indicated action appears to undermine A’s immediate interest. To establish credibility for a strategic move, A must devote resources to actions that will shift B’s expectations concerning A’s future behavior in the direction indicated by the strategic move. By contrast, \textit{cheap talk} means what it sounds like: statements or mere words that involve no devotion of resources. Cheap talk thus does not commit a party to any particular course of action, and thus offers no backing for strategic moves.

Two remaining points: First, technically a credible statement must somehow become a \textit{subgame perfect equilibrium}, indicating that A offers a best response to every possible relevant contingency, even ones that may appear unlikely. Should A fail to adhere to a prior commitment at some possibly unlikely contingency, B could exploit such failure. Second, strategic moves arise in environments of asymmetric information: B does not fully understand A’s motivations (reflected in A’s payoffs). Attaining credibility, therefore, requires expenditure of resources in order to shape B’s expectations concerning A’s subsequent behavior. Discussion below will illustrate these points.

\textsuperscript{36} Schelling (1960, 160) ties the definition of strategic moves to expectations: “A strategic move is one that influences the other person’s choice, in a manner favorable to one’s self, by affecting the other person’s expectations on how one’s self will behave.” Power\textsubscript{2}, then, involves altering beliefs of B, but such alterations concern execution of the game itself and does not extend to B’s desire to participate which falls under power\textsubscript{3}. This border line, however, is not always easy to draw.

\textsuperscript{37} At the point of making a strategic move, the present self, with long-run view of things, ties the hands of a possibly short-sighted future self. The future self, for example, might want to back down on executing a threat when the time actually arises.
There are two broad categories of strategic moves: unconditional moves and conditional moves. Unconditional moves commit an agent to taking a specific action in a sequential game, obviously tying hands. In a game that could confer a first-mover advantage, player A may literally or effectively seize the first move by credibly committing in advance to a specific strategy. In so doing, A changes the rules in a game that might otherwise have allowed simultaneous play or a first move by B. In games with multiple Nash equilibria, such as chicken or battle, a credible first-mover can choose the Nash and effectively bias the game against the other. For example, in a classic high-school driving game of chicken, if driver A can credibly commit to heading straight, B will want to swerve. Credibility here means that driver B expects that A would drive straight, even if B were to do the same. With this (manipulated) expectation, B swerves. Note further that such manipulated expectation then becomes a source of power: A can drive so as to win the game.

Naturally, there are requirements for making a strategic unconditional first move credible. First, it must be communicated and observed. If B does not either hear A’s announced strategy or see A driving straight, B may not swerve. Indeed, B may move strategically by communicating that it does not see A’s move, perhaps by wearing a blindfold. Second, A must somehow convince B that it will not reverse its move, that it will actually be in A’s interest to drive straight if B were to drive straight. Here, devotion of resources enters. Driver A might, for example, establish a reputation for unyielding toughness by fighting other students for weeks or months before the race. Now a statement “I’m driving straight, deal with it” might convey more than cheap talk. Ultimately, the success of the move depends on whether A can alter B’s expectations concerning what A will do.

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38 This second condition amounts to saying the move must be a subgame perfect equilibrium, Nash in every subgame. In some cases, a perfect Bayesian equilibrium (Nash at every information set) may be required.
Here are some examples of unconditional moves as exercises of power\textsuperscript{2}. When landing in Mexico, Spanish conquistador Cortez burned all but one of his ships, allowing the Aztecs to see the smoke—credibly signaling to both his own troops and the Aztecs that the Spanish would fight to the death (Dixit and Nalebuff, 1992, ..). This exercise of power\textsuperscript{2} altered the “rules” (available strategies and expectations of troops and Aztecs) that conditioned the subsequent power\textsuperscript{1} military encounter. It biased the subsequent war game against the Aztec fighters, who clearly still had the option of retreating. Figure 4-2 illustrates this game under the assumption that without a strategic move, Cortez and the Aztecs would have faced a game of chicken. Assuming the expected payoff averages the two Nash equilibria (*), each player would expect a payoff of -.5 in advance of the conflict. Cortez’ unconditional strategic move, guarantees the Spanish a payoff of 2.

**Figure 4-2**

<table>
<thead>
<tr>
<th></th>
<th>Aztecs</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Run</td>
<td>Fight</td>
</tr>
<tr>
<td>Run</td>
<td>0, 0</td>
<td>-3, 2*</td>
</tr>
<tr>
<td>Fight</td>
<td>2, -3*</td>
<td>-10, -10</td>
</tr>
</tbody>
</table>

Here is a second example—a two-player game of battle. Suppose that communities Arruba and Balthazar each prefer to have a common well constructed on their own territory and that two wells would be wasteful. Arruba could seize a first-mover advantage by starting construction. The necessary expenses might credibly signal A’s intent to finish the project no matter what. A political example: In legislatures, committee chairs may set the agenda for
discussion (a type of first move) in a manner that favors their preferred initiatives at the expense of others—left to the end of the agenda, if included at all. The reader is asked to develop such a game as an exercise.

A less obvious unconditional move involves securing a second-mover advantage. In a game that would have been simultaneous, moving second eliminates strategic uncertainty.\(^{39}\) Moving second confers advantage in games that lack Nash equilibria, where prediction of the other’s move is difficult under any circumstances. Before responding, player A may create or secure an opportunity to observe B’s move. Obvious examples arise in sports where teams often benefit from “reading the other’s signals.” In international relations, business, or politics, nations, firms, or competing politicians may gather intelligence, hoping to observe rivals’ moves or strategies before deciding upon their own. When such gathering is secret, credibility is not an issue, but the strategic move still requires expenditure of resources—spies and informants must be paid. Again, we have an exercise of power\(^2\), biasing the rules of the game in A’s favor. (Wen has alt example S. Africa and NK??).

Conditional moves, the second category of strategic moves, are more complicated. They take the form of if-then statements: if you do \(x\), I will do \(y\), with the implication that \(not-x \rightarrow not-y\). There are two basic categories of conditional moves, threats and promises. For each, both elements of the conditional statement require credibility. Typically establishing credibility for the first half, if \(x \rightarrow y\)—what we call primary credibility—requires devotion of resources. Because executing threats is costly to the issuing party, the recipient may not believe that the threat will actually be carried out. For example, . . . By contrast, secondary credibility, that pertaining to \(not-x \rightarrow not-y\), is automatic as long as implementing the designated threat or promise is costly to

\(^{39}\) Strategic uncertainty means uncertainty concerning prior or contemporaneous moves of other players. In purely simultaneous games, all players face strategic uncertainty.
the issuing party (A). In some cases, however, A must devote resources to establishing credibility for both an initial threat or promise and its implicit promise or threat. In all cases, conditional strategic moves, like unconditional ones, amount to tying A’s hands somewhat in order to alter B’s expectations vis-à-vis A’s conduct in a subsequent move or game. Again, the shift in expectations biases the game in A’s favor.

Threats constitute the most frequently noted exercise of power. Party A may preclude or reduce B’s ability to participate in various arenas by credibly threatening sanctions. For example, the Iranian government sometimes threatens domestic opponents with arrest with the intent of reducing the number who enter arenas, such as street demonstrations, where they could otherwise exercise power. Similarly, a large firm may threaten a potential market entrant with undercutting its prices. Threats may also constrain exercises of power by limiting strategies of those who enter arenas. Demonstrators may need to avoid certain public locations. As indicated, because threats are costly to administer, A must devote resources in advance to attaining credibility. Thus, prior to a demonstration, the government places various guards and police on payroll and constructs prisons. Similarly, a large firm may stockpile inventory in order to signal its ability to flood the market should a new firm enter.

A similar logic applies to strategic promises. To exercise power, party A may say to B, ‘if you stay quiet, I will pay you.’ Figure 4-3 offers a simple example of an, as of yet unsuccessful, attempt by the US to get North Korea (NK) to quit the nuclear club. Players, strategies, and payoffs are indicated. The normal-form game on the left shows the situation with no strategic move. The Nash equilibrium (No Aid, Keep) indicates a bad outcome for the US. As

Indeed, whenever secondary credibility is automatic, primary credibility is problematic.

For Bowles and Gintis a sufficient condition for the exercise of power is the ability to impose or credibly threaten to impose sanctions (1992, 326-27).

Typically parties use threats for deterrence (prevention of an undesired action) and promises for compellence (attainment of a desired action).
a strategic move, the US could promise to offer NK aid if it dismantles its nuclear weapons. If
the promise is credible (perhaps the US has invested reputation in similar statements) and the
forthcoming aid is large enough (here if \( x > 8 \)), the strategic promise could improve the outcome
for the US (NK too, given these payoffs). Note further that Figure 4-2 also illustrates secondary
credibility. Because No Aid is the US’s best response to Keep (aid is costly), the implicit threat
(if Keep→No Aid) is automatically credible. Similarly, for most threats, like those in the
previous paragraph, an implicit promise—if you do as we wish, no sanction—is likewise
automatically credible due to costs of execution. As an exercise, however, the reader is asked to
consider a situation where \( \text{not-}x \rightarrow \text{not-}y \) lacks credibility.

Strategic Moves and the Nash Bargaining Model: We may now use the Nash cooperative
bargaining model to compare power\(_2\)’s strategic moves with power\(_1\). Concerning unconditional
moves, in a game like that shown in Figure 4-1, party A could seize a first-mover advantage if it
credibly signals that it will accept nothing less than, say, a 90/10 split of the surplus. This power\(_2\)
move could bias the game in A’s favor in a case where a power\(_1\) version of the game would
indicate, say, a 50/50 split (\( \alpha/\beta = 1 \)).
Alternately, prior to a power\(_1\) bargaining game, party A could move strategically to change one or both fallback positions in its favor. In Figure 4-1, if A can reduce \(d_B\), increase \(d_A\), do both, or lower \(d_B\) more than \(d_A\), it will shift segment PQ upward, awarding A a larger share of \(v\). For example, consider negotiations between a union and a company within a specified bargaining context (arena) with fixed fallbacks to represent exercise of power\(_1\). Each side’s ability to mobilize support among its own constituency, potential for moving first, relative impatience, etc. determine the ratio of power\(_1\) bargaining strengths \(\alpha/\beta\). Suppose further that, prior to any strategic move, fallbacks \(d_A\) and \(d_B\) signify the payoffs to each of facing a strike—the already expected outcome of failing to negotiate an agreement. Power\(_1\) bargaining will then yield outcome Q. Now, either side could exercise power\(_2\) by trying to influence the expected consequences to the other of facing a strike. The company (A here) might visibly stockpile production to bolster the union’s perception of \(d_A\). It might threaten shutdown in the face of a strike to lower the union’s expectation concerning its own fallback (\(d_B\)). Likewise, the union might threaten a longer-than-expected strike in order to reduce the company’s expected \(d_A\) and try to attain credibility by rallying its members. If either side is successful, it shifts segment PQ in its favor, increasing its share of \(v\).

 Appropriately, manipulation of fallbacks in a Nash bargaining game is called “variable threat bargaining (DSR, 701).” Formally, in the first stage (or pre-game), one or both parties execute strategic moves to manipulate fallbacks. In the second stage, they play the power\(_1\) game shown in Figure 4-1. We may take the argument further. As Gaventa suggests, exercise of power\(_2\) may influence power\(_1\). A credible threat to shut down may not only reduce \(d_B\), it may also reduce the union’s morale or increase its impatience, reducing its power\(_1\) \(\beta\).
So far, our discussion of power has indicated that A can manipulate rules of a game by engaging in unconditional moves (use of obstructive force, setting agendas, spying, etc.) or conditional threats (sanctions for participation) or promises (bribes for non-participation) in order to maneuver B’s expectations concerning A’s future behavior and associated outcomes or exploit strategic knowledge to A’s advantage. In so doing, A may preclude B’s access to various arenas or limit B’s ability to participate (exercise power) within them. Again, these altered expectations become a subsequent source of power for A. Inaction from B, then, may not reflect lack of concern or contentment with the status quo as pluralists would have it.

The power concept of “mobilizing bias,” however, goes further. It includes the use of cultural symbols and other forms of communication in order to alter other parties’ (Cs) perceptions of B or B’s actions. Section 3 will address this question by introducing a triadic concept of power.

Section 3: Extensions of Power: Triadic Power Relations and Power in Exchange

A more expansive concept of power which allows influence to and from other parties (Cs) facilitates understanding exercises of power within exchange processes and moves us in the direction of power. As a foundation for this argument, we first discuss Basu’s triadic concept of power relations (2000, 132-165).

Basu argues that triadic models more clearly represent the inherent tendency for power to be distributed asymmetrically among parties than dyadic models. Dyadic models of power examine relations between agents matched in pairs (A and B) such that their exercises of power have no impact on either’s relations with other agents (various Cs) and vice versa. By contrast, in triadic models of power, at least one party may influence the other’s interactions with one or

43 Recall that in the pluralist vision of power, access to arenas is open.
more Cs, or the presence of Cs may impact interactions between A and B. If A can affect B’s relationship with one or more Cs and B lacks such ability (or has less of it), then power is fundamentally asymmetric.

The conceptual problem with dyadic models of power is that analytical symmetry too easily enters—in which case it is not obvious who exercises power over whom. Consider a dyadic promise. Agent A offers B a bribe to, say, buy a vote. From one angle, A has exerted power over B. Yet, if earlier B had communicated a reluctance to vote as A wishes, it might have induced A to pay for B’s vote. Now B exerts power over A. One might even regard the exchange of money for a vote as a voluntary market exchange. While surely knowing more about the context, in particular attention to institutional positions, can often resolve this question, Basu argues that triadic conceptions of power are inherently asymmetric and thus more appealing theoretically. Moreover, power relationships that accompany market exchange typically involve triads of some sort.

To illustrate triadic power, Basu uses an example of a landlord, laborer, and merchant (agents A, B and C respectively) who engage in labor or product exchanges. Agent A hires B to work the land, offering wage $w$. B has some non-employment next best alternative (fallback, $d_B$). In a competitive model, the equilibrium wage would equal the fallback ($w^* = d_B$). Exchange would be voluntary and B is no worse (or better) off working for A. Now suppose that both A and B have trade relations with C from which they gain values $V_A$, $V_B$, $V_{CA}$, and $V_{CB}$. If A can credibly threaten to cut off B’s trade relationship with C, A can pay any wage ($w$) that meets this condition: $d_B - V_B \leq w < w^*$. For A’s threat to be credible, however, C must value its

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44 Basu does not actually discuss the idea that Cs influence relations between A and B, but it is consistent with his concept of triadic relations.

45 Basu notes that the same symmetry problem can also arise with condign power (threats), but he does not elaborate. The reader may consider this as an exercise.
relationship with A more than that with B \((V_{CA} > V_{CB})\). Proof of this proposition, with a few additional specifications, is left to the reader as an exercise.

The important point for the present discussion is that A has exercised power in order to shift the distribution of income that follows exchange in its favor. A’s threat has altered the rules of the game, so that the competitive outcome no longer obtains. As a result, A can “exploit” B in the sense of paying a wage \(w < d_B\). Even so, B voluntarily accepts A’s offer because it fears losing its relationship with C. Basu goes on to argue that voluntary choice of exchange is not a sufficient condition for the absence of coercion. Thus in environments where triadic relationships accompany voluntary market exchanges, the exercise of power can influence distributional outcomes, such as the relative size of wages. In such cases, contra Learner, a market transaction is, in fact, an unsolved political problem.

A more expansive concept of triadic relationships, triads with many Cs, facilitates a more fundamental application of power to market exchange. Contracting relationships, ubiquitous in complex exchange, engender such exercises of power. Chapter 3’s discussion of enforcement within exchange offers the necessary foundations. Recall that in principal-agent relationships, asymmetric information with respect to post-contractual actions of the agent creates a need for an internal enforcement mechanism. The effort model (see pp…) illustrates such enforcement via contingent renewal. The firm (A) enjoys a first-mover advantage, being able to make a take-it-or-leave-it offer. Firm A offers worker (B) a wage \(w\) that is better than B’s next-best alternative \((w > d_B)\) and stipulates that A will renew B’s contract only if A finds B’s effort \((e)\) to be sufficient. Here the employer’s implicit threat of termination is both credible and consequential to the employee because \(w\) exceeds the market-clearing wage. Not only does B face a possible cost of

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46 Bowles states that the positional advantage the firm enjoys as the initiator of the first move reflects what he calls strategic asymmetry arising from the employer’s ability to pre-commit (2004, 249).
job loss, there are equivalent unemployed workers (Cs) who would gladly replace B. Moreover, as indicated in chapter 3, this credible threat of costly of job loss motivates B to offer greater effort than it otherwise would. Firm A has thus exerted power over worker B in order to alter B’s effort trajectory. The presence of Cs, the triadic element here, facilitates A’s exercise of power.

A few additional points are worth noting. First, A’s ability to make credible threats (and thus exercise power) arises from its position in the exchange process. Employers occupy what Bowles and Gintis call the short side of the labor market. The short side is the side without excess, or the side that desires fewer transactions (1992, 339). By contrast, workers occupy the long-side, where there is an excess (excess supply; the unemployed Cs). The relative scarcity of employment opportunity renders threatened job loss credible. Second, the effort model’s triadic relationship differs from that in the landlord-laborer-merchant case. Here, A does not directly influence B’s relationship with any of the Cs. Rather, the presence of multiple unemployed Cs conditions interactions between A and B, again, lending credibility to A’s threatened sanction of job loss. Third, B is not exploited in the prior sense. In fact \( w > dB \); B earns an employment rent. This impact of power on distribution is perhaps counterintuitive, but note that B increases \( e \) and A maximizes profits (recall, it minimizes \( w/e \)). The ensuing employment rent is the cost A must bear due to B’s discretion over effort in an environment of asymmetric information (Bowles and Gintis, 1992). Accordingly, Table 3-1 indicates that for labor relationships, the principal (the employer) bears the transaction costs associated with enforcement. Similar rents arise in other principal-agent models, including those for credit

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47 In the labor market, the supply-side is the long side. In others, such as capital markets, the demand side is the long side.
markets (Stiglitz, 1987; Bowles, 2004). Fourth, note that it is unclear whether the final \(w\) is greater or less than the \(w^{*}\) that would have obtained in an imaginary competitive market with perfect and complete information. There is an employment rent, \(w > d_B\), yet with unemployed Cs, \(d_B\) is less than it would be under hypothetical pure competition.

Finally, Bowles and Gintis note that the exercise of power here facilitates a Pareto improvement over a similar situation without power (even so, the outcome is not Pareto optimal).\(^{49}\) Given asymmetric information and B’s discretion over \(e\), a failure to exert power here would yield a lower \(w\), lower \(e\), and lower profits (\(w=w_r\); \(e=\bar{e}\); and \(\bar{e}/w_r < (e/w)^*\), as shown in Figure 3-6). A’s exercise of power thus serves as a coordination device (Bowles and Gintis, 2008, …). This outcome fits perfectly with the analysis in chapter 3: the contingent-renewal enforcement mechanism helps to resolve the second-order CAP associated with provision of effort in contractual labor relationships. The attendant exercise of power ameliorates some of the market failure that arises from asymmetric information.

Lest we become too optimistic about the use of authority within firms, however, Bowles and Gintis add that employers may also use their position to exert somewhat arbitrary managerial authority over the workplace environment. They mention general working conditions as well as managerial practices including various forms of harassment and discrimination. Essentially the credible threat of sanctioned job loss allows management discretion that would not appear in a hypothetical pure competition world. Along somewhat similar lines, Ferguson (2005) argues that the implicit bargaining power that is embedded in employment relationships can lead to systematic and persistent workplace discrimination. Thus, exercises of power in exchange may

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\(^{49}\) Chapter 3 has already indicated substantive transactions costs here and in other cases of asymmetric information. More formally, Bowles and Gintis show that the effort model outcome is both Pareto inefficient and technically inefficient (p…).
generate either socially beneficial or undesirable outcomes (as in Pareto improvement or discrimination).

Finally it is important to emphasize that the exercise of power₂ in market exchange is neither confined to employment relationships nor to the exercise of authority within firms. In credit markets, similar models indicate that lenders offer below market-clearing interest rates in order to discipline subsequent borrower behavior, yet lenders and borrowers do not share positions within the same firm. The ability to exercise this form of power₂ within exchanges arises from the positions of A and B in the relevant market. In credit markets, lenders occupy the short side (supply). Again the exercise of power₂ can lead to Pareto improvement. Indeed one could argue that the financial crisis of 2007-2010 occurred in part because lenders (notably investment banks), seizing very short-run profit opportunities with ultimately (wildly) unrealistic expectations, failed to exert normal discipline over extensions of loans.⁵⁰

Table 3-1 lists additional types of markets that use contingent renewal as a contracting enforcement strategy, including markets of managerial services, business supply, and residential tenancy. All of these contractual relationships use power₂ to some extent to ameliorate the second-order CAPs that accompany contractual information asymmetry, all with distributional implications (though not necessarily clear cut ones). To sum up, we find that a triadic power interpretation of the internal enforcement mechanisms that accompany principal-agent models of contracting indicates extensive, indeed necessary, application of power₂ across many critical forms of market exchange. Because of CAPs, power permeates micro-level political economy.

Before proceeding to section 4, consider another variation on triadic relationships within the domain of power₂. Here A influences B’s relationship with many C’s. Discussing caste

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⁵⁰ Chapter 6 will discuss mental models. One could ask why the bankers’ models were so systematically wrong—a CAP in its own right (Ferguson, 2010).
relations in India, George Akerlof suggests if a Brahman were to hire an outcast as a cook, the former would be socially ostracized and the latter would face extreme difficulty finding subsequent employment (1976, 609-10).” Expanding upon Basu’s landlord-laborer-merchant model, suppose that A can threaten B as follows: If you do not accept my offer of \( w \), I can cut off your exchanges with many (all) Cs. Of course, for the threat to be credible, Cs would need to value their exchanges with A more than those with B. A would need to occupy a particular type of niche within a structure of exchange. An employer in a “one-company” town offers an example. (iron triangle example?) With credibility, A could offer B a wage below that from the one-merchant example, and B would voluntarily accept. The combination of A’s unique position and a multiplicity of Cs here augments A’s ability to steer distribution in its favor via exercise of power.

Akerlof offers a more political example of extended triadic power. Discussing the early 20\(^{th}\) century New York municipal planning/construction machine of Robert Moses, he says:

> . . . but it was clear to all concerned that disobedience to the boss’s dictates regarding construction would lead to outcasting from the machine. For the politician, this meant loss of campaign funds and of the construction pork barrel…for for engineers, it meant loss of a job. Furthermore…persons who failed to respect the outcast status of those in Moses’ disfavor, were in turn threatened… (1976, 616).

As suggested in the opening of this chapter, exercises of power may also include A’s use of various forms of communication and cultural symbols to undermine the legitimacy of B as a person or B’s actions. In this sense A literally mobilizes bias against B. We gave the example of Senator Joseph McCarthy. This variation on the exercise of power may be understood as a manifestation of Basu’s triadic power relations, just with many C’s and many kinds of exchanges. A triadic concept of power relations, then, informs not only our understanding of the possibly counter-intuitive yet nearly ubiquitous exercise of power within market exchanges but
also the political manipulation of cultural symbols in order to mobilize bias. We have now set the stage for a discussion of conditioned power which offers an example of the exercise of power.

Section 4: The Influence of Many Cs: Conditioned Power as an Example of Power

A full modeling of Gaventa’s power lies beyond the scope of this text. Basu, however, provides an insightful model which illustrates John Kenneth Galbratih’s closely related concept of conditioned power. Conditioned power concerns situations “where the oppressed are so habituated to their situation that they are unaware of being oppressed (Basu, 134).” Here we see that a multiplicity of Cs can generate a habitual response among the Bs. A fuller understanding of Akerlof’s concept of caste relations is consistent with this approach.

Basu’s diffused dictatorship model illustrates Vaclav Havel’s (1986) concept of a post-totalitarian system, a manifestation of conditioned power. We first consider a classical dictatorship model. A ruler (A) demands tax – $t$ from all subjects (Bs) and credibly threatens to punish for withholding. The ruler has, after all, devoted resources to establishing an army. Bs who fail to cooperate keep value $t$, but face punishment value $-k$, perhaps time in jail. As long as $t-k < 0$, each B will find it in their interest to comply with the ruler. Here the Bs face a first-order CAP with respect to organizing resistance. Note that power relations here are dyadic—A interacts separately with each subject B, and these interactions have no impact on relations with anyone else (and vice versa). Nevertheless, the surrounding context suggests considerable asymmetry in access to resources, hence asymmetric power.

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51 It would make an excellent exercise for a graduate course.
52 Galbraith also discusses compensatory power (power of rewards or promises) and condign power (power of punishment or threats). Depending on prior knowledge or context, these could fit under either power or power. Along with conditioned power, these are Galbraith’s three channels of power (Basu, …).
53 Analogous to belling the cat and other examples.
To transform this model to post-totalitarian model, we allow the ruler to influence relations between each subject (B_i) and a large number of others (C_s, who when they interact with the ruler are also subjects, so we call them B_jr). Suppose anyone who does not pay tribute suffers social ostracism and suffers utility loss f. Basu then defines a disloyalty from the ruler’s point of view. A disloyal B is someone who either does not pay tribute or interacts with someone who does not pay. If we add the assumption that everyone expects everyone else to be loyal, potential noncooperators should expect to earn payoff t-k-f < 0. Note that we no longer need a condition k > t. Furthermore, if f > t, all will cooperate with even if k=0. At this threshold, we transition fully to conditioned power. The subjects are so conditioned to expecting ostracism from disloyalty, that the ruler need not have any punishment (or reward). Basu goes so far as to say that we do not even need a ruler (2000, 136-37). We have crossed the threshold into conditioned power and thus from power_2 to power_3 in the sense that it is only the beliefs of the Bs that holds them subject.

To pursue a game-theoretic interpretation, note that a person need only be “loyal” in the weak sense that they will not interact with anyone who is disloyal as long as they expect others to be loyal. We could illustrate the Bs’ problem as being placed on the wrong side of a tipping point in a multi-player game of assurance, where the payoffs depend on the number of agents who expect certain behaviors. The loyalty equilibrium is a focal point and the Bs face what we call an expectational CAP. As an exercise the reader is asked to model this game. In order to change their situation they must first alter the expectations of a critical mass of B’s. Such a change in shared expectations is a pre-condition for any coordinated behavioral change.


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54 Chapter 7 will use the term socially-enforced convention for this kind of situation.
primarily in a society-wide expectation of near universal loyalty to the state in the sense defined here. The enforcers (police and army) did not believe in the system any more than the masses of people; they just shared the same expectations. Basu also draws a parallel to the phenomenon of McCarthyism in the United States in the early 1950s. As mentioned in the discussion of power2, McCarthy strategically manipulated cultural symbols of loyalty. But he did more than that because his power derived primarily from society-wide expectation of near universal anti-communist “loyalty” as McCarthy defined it. This bears striking resemblance to ruler’s definition here (associating with those considered to be unloyal is unloyal)55 In that sense, McCarthy’s power extended beyond power2 into conditioned power. Basu (2000, 147) cites Eric Posner (1998, 782): “. . . one of the most striking aspects of McCarthyism, was that this campaign resulted from McCarthy’s entrepreneurial modification of focal points, not from changes in the law.”56

Chapters 7-9 will argue that shared expectations lie at the core of an understanding of institutions. Institutions as (often partial, sometimes dysfunctional) solutions to CAPs invoke attributes of power2 and power3, though not always as outcomes of deliberate action and, even when more or less designed, not always in a manner that generates pre-envisioned outcomes.

Section 5: Power and Political Economy

That power enters political relationships is obvious. That political power influences economic outcomes is also obvious. That power enters bargaining relationships is obvious. What is less obvious is that resolution of CAPs requires that power relationships enter the foundation

55 Indeed it was a challenge by one individual, broadcast on TV, led to the “dethroning” of the infamous Senator, by instigating the realization that the Senator could, indeed, be challenged. (detail and citation)
56 Akerlof’s (1976) discussion of New York planner/boss Robert Moses suggests a similar combination of power2 and conditioned power.
of economic exchanges, even relatively competitive ones. Whenever there is asymmetric information or costs to entry or exit (e.g., contracting costs), the resolution of attendant second-order CAPs generates (often requires) opportunities for the exercise of power.

If we look to the domains over which power is exercised, focusing on the distinctions between power1 and 2—impacts on behavior within given contexts vs. influence on contexts (rules and expectations)—we find both permeate exchange, often in combination. Power1 manifests itself in bargaining associated with creating or implementing agreements under given contexts that are understood and accepted by the relevant parties. Parties may directly use force or mobilize support, with their ability to do so conditioned by available resources and a potential to resolve CAPs, already given first moves, and advantages conferred by relative patience in order to tilt outcomes in their direction. A Nash bargaining model with fixed fallback positions, interpreting power1 as the bargaining strengths (α and β) of the parties may illustrate cases such as union bargaining in fixed arena or bargaining between a firm and its supplier. We can relate determinates of bargaining strengths α and β to one or more of the above factors.

Given the prevalence of asymmetric information in economic and political exchanges, however, conditions for pure exercise of power1 are likely quite rare. With asymmetric information, opportunities to manipulate the rules of the game, via seizing not previously obviously designated first (or second) moves, or via threats and promises, abound. Parties then seek further advantage by tilting rules or expectations to their advantage, invoking Power2 as well. To model power2, we employ the game-theoretic concept of strategic moves, specifically unconditional moves, threats and promises. We find the greatest application to exchange when we combined threatened sanctions with triadic power relations. Here either a direct ability of party A to manipulate B’s relations with one or more Cs or the potential for the presence of Cs to
impact relations between A and B extends the realm of power directly into market exchange. In the former case, A may tilt distribution directly in its direction. In the latter, the presence of C’s allows for credible sanctions that influence B’s post-contractual behavior in a manner that at least partially addresses second-order CAPs of contract enforcement, while at the same time moving outcomes to A’s advantage, and often B’s as well, at least compared to the alternative of no resolution. Power thus infuses micro political economy, inextricably linking growth to distribution. The more elusive concept of power, power over preferences and beliefs, will inform our subsequent discussion of the foundations of preference—if preferences are manipulable, then we cannot always treat them as given, as exogenous variables. Furthermore, it suggests potential roles for institutions in framing expectations and beliefs.

Up to this point, we have assumed traditional self-interested rational actors. Chapter 3 argued that mechanism design with such actors can partially resolve second-order CAPs, notably those associated with enforcing contracts, but did not provide us with a solid explanation of why many seemingly intractable CAPs, including ones associated with contracting, appear to be ameliorated or resolved in practice. Chapter 4 has extended implications of chapter 3 into the realm of power and strategic moves. In so doing, the concepts of power 2 and 3 suggest that we need a more comprehensive conception of the motivation of actors. Chapter 5 begins to address these questions.
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