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State Capacity as Power: A Conceptual Framework

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2016

[Link to publication](#)

Citation for published version (APA):

Lindvall, J., & Teorell, J. (2016). *State Capacity as Power: A Conceptual Framework*. (STANCE Working Paper Series; Vol. 2016, No. 1). Department of Political Science, Lund University.

Total number of authors:

2

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State-Making and the Origins of Global Order
in the Long Nineteenth Century and Beyond

State Capacity as Power: A Conceptual Framework

Johannes Lindvall and Jan Teorell

Working Paper Series, 2016:1
STANCE, Lund University



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State Capacity as Power

A Conceptual Framework

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I Introduction

State capacity has become a major research topic in the social sciences. A large and growing literature now argues that if we wish to explain long-run political changes and enduring differences in economic and political development among countries, we first need to understand how states become able to control their territories, raise taxes, establish effective bureaucracies, and deliver public services.¹ This literature has made significant progress over the years, but there is still no agreement on the definition of state capacity, the relationship between state capacity and other important concepts, or how best to study state capacity empirically.

We argue in this paper that state capacity should be treated as a form of power. This idea is not new in itself. Indeed, recent major studies of state capacity by Slater (2010, 3, 35) and Soifer (2015, 9) build, as we do here, on Michael Mann's concept of "infrastructural power" (1984). But we argue that treating state capacity as a form of power has important implications for conceptualization, theory, and empirical research that are often overlooked. Our paper identifies those implications and develops an argument that helps to resolve many of the difficulties that scholars of state capacity confront. In particular, we integrate the concept of state capacity in a broader theoretical argument about how states use specific resources to enhance the effectiveness of the instruments that governments have at their disposal.

In a seminal piece, Soifer (2008) distinguishes among three analytical approaches to state capacity, which he calls the "national capabilities approach," the "weight of the state approach," and the "subnational variation approach." According to the national capabilities approach, state capacity can be equated with the stock of re-sources that are available to the central state, which is seen as "invariable within a particular country" (*ibid.*, 236). According to the weight-of-the-state approach, state capacity is instead defined as the "extent of state effects on society," or, in other words, how much the state's radiating institutions actually influence social actors (*ibid.*, 239). The subnational variation approach, finally, "focuses on the uneven reach of the state, centered on the varied ability of a particular state to exercise control within its territory" (*ibid.*, 242).

Our argument integrates these three approaches. We define state capacity as the state's power to achieve intended outcomes (the "weight of the state"). But we also incorporate this concept in a theoretical argument about how states use and invest in state resources ("national capabilities") to broadcast power across its territory ("subnational variation"). This argument also avoids

confusing the concept of state capacity with related concepts, such as the level of state autonomy, the nature of the political regime, or the quality of government. Moreover, it suggests new avenues for theories of state making and state formation, since it identifies the dimensions along which states develop and vary and explains what it means to “invest” in state capacity. Finally, our argument has implications for empirical research, for if state capacity is a form of power, and if power is a causal effect, it is not possible even in principle to measure state capacity as such. What *is* possible, however, is identifying and measuring the resources states use to exercise power. In our view, measuring those resources is the best way forward for empirical research on state capacity.

The paper is organized as follows. We start by relating our contribution to the extant literature on state capacity (section II). We then outline our approach (section III), followed by our argument for its implications for conceptualization (section IV), theory (section V) and measurement (section VI). We conclude by summarizing our argument (section VII).

II Related Literature

At the most general level, the term “state capacity” refers to the state’s ability to get things done. Several broad definitions in the literature convey this general meaning: “the capacity of the state ... to implement logistically political decisions throughout the realm” (Mann 1984, 189); “the ability of state leaders to use the agencies of the state to get people in the society to do what they want them to do” (Migdal 1988, xiii); “the capacity to implement state-initiated policies” (Geddes 1994, 14); and “the degree of control that state agents exercise over persons, activities, and resources within their government’s territorial jurisdiction” (McAdam, Tarrow, and Tilly 2001, 78). In politics, “getting things done” almost always involves the exercise of *power*, which is why it makes sense to define state capacity explicitly as a form of power. In doing so, our paper relies on Mann’s foundational discussion of “infra-structural power” (1984, 1993), which was also a major source of inspiration for the recent studies by Slater and Soifer that we cited earlier. But we go further by integrating the concept of state capacity in a broader theoretical argument about how states use specific resources to enhance the effectiveness of the instruments that governments have at their disposal.

Without a clear, theoretically motivated definition such as the one we propose in this paper, there is a risk that the concept of state capacity becomes

all-encompassing and therefore analytically suspect. But there are also several approaches to state capacity that we believe conceive of the concept *too* narrowly. Centeno, Kohli and Yashar (2017, 5), for example, define state capacity as “the organizational competence of the bureaucracy.” Another unidimensional approach with a long pedigree is to equate state capacity with “extractive” or “fiscal” capacity, or, to be more specific, the collection of taxes (Levi 1988). A third starts from Scott’s (1998) idea of “legibility” and equates state capacity with the informational capacity of the state (Lee and Zhang 2017; D’Arcy and Nistotskaya 2017). Although defining state capacity narrowly is a good idea, these unidimensional approaches overdo it. We instead treat the quality of the bureaucracy, revenue extraction, and information capacity as factors that together contribute to the effective implementation of public policies.

There is also a large, applied literature on state capacity that is concerned with how states achieve various individual economic, social, and political outcomes by performing individual functions. Economists are typically interested in the contribution of state capacity to economic growth (Bockstette, Chanda, and Putterman 2002; Besley and Persson 2011); scholars of war and civil war are typically interested in peace and conflict (Sobek 2010); and scholars of environmental policy are typically interested in pollution and natural resource management (Schwartz 2003). Since different studies have examined different outcomes, they have also concentrated on different state functions, and not on generic state capacity. We are indebted to many of these studies, and particularly to Besley and Persson (2011), who introduce the key idea that scholars of the state need to understand when and why political leaders chose to forego short-term policy goals and instead *invest* in state capacity. But our aim is to develop a more general theoretical argument about state capacity that is not tailored to explaining specific outcomes, such as economic growth, or the performance of specific functions, such as tax collection.

There is, moreover, a large literature on concepts that are related to state capacity, such as “good governance” (Fukuyama 2013) or the “quality of government” (Rothstein and Teorell 2008). In our view, concepts such as quality of government denote procedural constraints on *how* states exercise power, whereas the concept of state capacity denotes the extent to which states *can* exercise any power in the first place. As we explain later, one of the virtues of the concept of state capacity as power is that it allows us to redraw the often-blurred boundaries between state capacity and related concepts.

Finally, there is an important literature on state power in the international system that is relevant for our argument (see, for example, Barnett and Duvall

2005). Although we restrict attention to domestic state capacity, we are particularly indebted to Baldwin's (1979) analysis of the "paradox of unrealized power" – the fact that the possession of observable power resources cannot in itself explain the level of state power or capacity. Our approach also highlights why state resources cannot be equated with state capacity, although state resources are related to state capacity in ways that make it meaningful and informative to measure them empirically.

III Our Approach

We define state capacity explicitly as a form of power; we then explore the implications of doing so. Following Dahl (1957), we define power as follows: "A has power over B to the extent that he can get B to do something that B would not otherwise do," where A is the state (or agents of the state) and B is society (or members of society). For those who recall the famous "faces of power"-debate in the 1970s (see especially Bachrach and Baratz 1970 and Lukes 1974), it is important to point out that this debate primarily concerned itself with how Dahl in his later book *Who Governs* (1961) chose to *measure* power (namely by determining whose preferences prevailed in instances of open conflict). But Dahl's earlier conceptual *definition* of power encompasses the second and third dimensions of power. For example, if A controls the decision-making agenda and thereby prevents political conflicts over the issues B cares about from becoming manifest, A is still making B do things B would not otherwise do. The same goes if A influences what B wants or believes. By drawing on Dahl's original definition, not his empirical measure, our argument doesn't depend on any particular position in the old "faces of power" debate.ⁱⁱ

We rely on Dahl's concept of power for a more particular reason: we wish to treat state capacity as a causal relationship between state policies on the one hand and economic, political, and social outcomes on the other. Dahl's definition fits neatly with the most widely supported theory of causality in the social sciences to-day: the "counterfactual theory of causality" (Collins et al. 2004), or, as it is sometimes called, the "potential-outcomes" model of causal inference (Imbens and Rubin 2015). According to this theory of causality, the defining feature of a causal process is that if the cause had been absent, the extent to which (or probability that) the effect is realized would be different. It is a probabilistic theory of causality, since it treats deterministic relationships (in which an effect always follows from a cause) as a limiting and

unusual case. It is also a potentially singular theory of causality, which can, in principle, be applied to discrete or even unique events; it does not necessarily involve claims to universality (or even generality). The connection between the counterfactual theory of causality and Dahl's concept of power is obvious: Dahl's concept relies on counterfactual claims (about what "B would not otherwise do"); it is probabilistic rather than deterministic ("to the extent that"); and it involves relationships among a specific combination of agents (in the simplest model, *A* and *B*).

As Soifer has noted (2008, 239), this concept of power also lends itself naturally to an analysis of intentionality. A state's capacity to do something has little explanatory value if political leaders do not in some sense desire or hold a "positive attitude" toward that something (White 1971). We therefore restrict our analysis to intended outcomes of state actions. This has some important consequences. It becomes difficult, for example, to compare the level of state capacity across states that are governed by leaders with vastly different ideological dispositions, and, hence, intentions. Moreover, since we restrict ourselves to intended outcomes, states that do not wish to achieve anything whatsoever fall outside the scope of our analysis; one might think of such states as weak by definition.

In slightly more formal terms, we think of a state as an organization that implements policies, **p**, to achieve specific outcomes, **y**, and we think of state capacity as the strength of the causal relationship between **p** and **y**. When the government of a high-capacity state decides to adopt the policy *p* to achieve the outcome *y*, it is more likely to be successful than the government of a low-capacity state would be if it adopted the same policy.ⁱⁱⁱ Although this framework assumes a basic level of intentionality, we have broad notions of "policies" and "outcomes" in mind. Policies do not have to be programmatic – they can range from anything from an executive order to put down a local insurgency to the design of a complex pension system. And the intended outcomes do not have to be public goods – indeed, they can be almost anything, even something sinister, as long as they extend to society, going beyond the limits of the state itself.

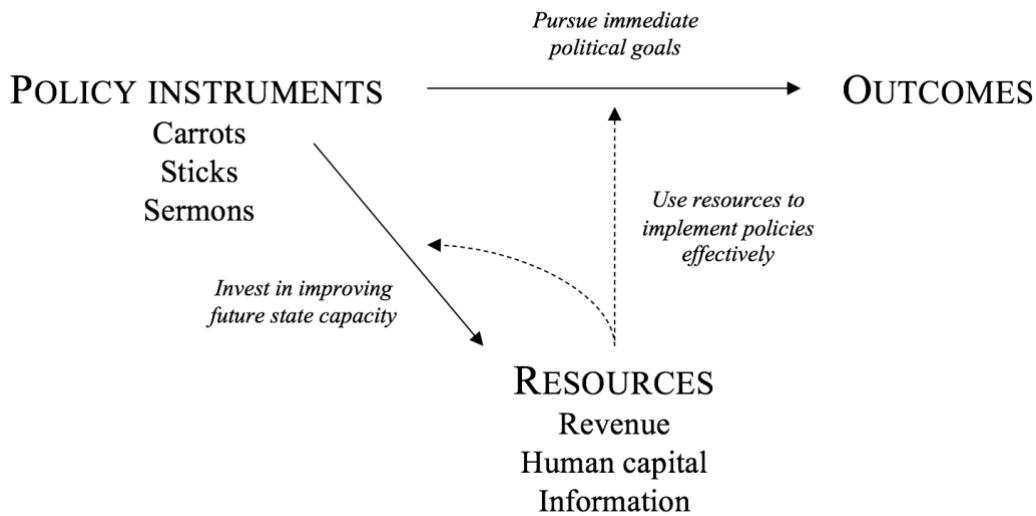
The next building block of our analysis is the concept of policy instruments. When states try to "get things done" – that is, when they adopt a policy that is meant to make members of society do things they would not otherwise do – they use bundles of instruments, or tools. Those instruments come in three basic varieties, which Bemelmans-Videc et al. (1998) refer to as "sticks" (coercion), "carrots" (economic incentives), and "sermons" (propaganda), and which are akin to what Mann (1984, 193) calls "military," "economic," and "ideological" power.

To see the distinction between these three types of policy instruments, imagine that the state would like to make sure that as many citizens as possible do y (pay their taxes, say), although many citizens in fact prefer to do $\sim y$ (evade their taxes). The state can achieve this outcome in three different ways. The state can use “sticks” by punishing citizens that do $\sim y$, so that the benefit of doing y is greater than the benefit of doing $\sim y$ minus the cost of being punished – or in other words, so that $u(y) > u(\sim y) - u(\text{punishment})$, where u is a utility function. Alternatively, the state can use “carrots” to reward citizens that do y , so that the benefit of doing y plus the reward makes citizens better off than doing $\sim y$, or, in other words, so that $u(y) + u(\text{reward}) > u(\sim y)$. Finally, the state can use “sermons” – persuasion or propaganda – to change the preferences of the citizens so that the (subjective) benefit of doing y becomes greater than the (subjective) benefit of doing $\sim y$. In formal terms, this means that the utility functions of the citizens change from u to u^* , ensuring that $u^*(y) > u^*(\sim y)$.^{iv}

It is important to distinguish between the effects of sermons and the effects of political legitimacy, which is an internalized motivation to obey. In our analysis, an internalized motivation to obey is represented by the form of the underlying utility function u , which we take as given since we wish to keep the problem of legitimacy separate from the problem of state capacity. If the government is seen as legitimate, the distance between what members of society are intrinsically motivated to do and what the agents of the state try to make them do is smaller, reducing the need for the open display of power. Sermons, by contrast, attempt to change the preferences of the citizens in order to increase compliance. The effect is the same – the “distance” between what the government wants and what the citizens are disposed to do decreases – but the causes are different.^v

We now turn to the final building block in our analysis: the *resources* states use to increase the effect of \mathbf{p} on \mathbf{y} . We denote those resources \mathbf{r} . In other words, the causal relationship between \mathbf{p} and \mathbf{y} – which, again, is how we define state capacity – is conditioned by \mathbf{r} . In theory, \mathbf{r} represents all the assets the state can use to carry out policies more effectively – or, in other words, all resources the state can use to improve the way it coerces (“sticks”), bribes (“carrots”), or persuades (“sermons”). The three most important types of state resources, in our view, are *revenue* (state income), *human capital* (the quality of the state administration), and *information*.

FIGURE 1: Resources, Policy Instruments, and Outcomes



Our argument is summarized in Figure 1. Revenue (in money or equivalent resources) is important since implementing policies is always costly. The more financial resources a state controls, the more policemen and judges it can hire to enforce the laws (sticks), the more it can spend on transfers and services (carrots), and the more propaganda it can produce (sermons). As Levi (1988, 2) notes, “The greater the revenue of the state, the more possible it is to extend rule.” Since this factor is so important, “fiscal capacity,” the state’s ability to raise revenue, is often treated as a particularly important dimension of state capacity.

But revenue is clearly not all. Agents of the state need specific skills to perform their functions well. The human capital inherent in the state administration is therefore necessary for the effectiveness of government policies, putting a premium on administrative institutions in which officials are selected based on skills, education, and training, and rewarded for loyalty and effectiveness (Evans and Rauch 1999; Centeno, Kohli and Yashar 2017). Strong administrative institutions cannot be created instantaneously, which is why the second resource cannot be reduced to the first (revenue): human capital is an asset that states need to accumulate over time.^{vi}

Finally, just as a firm does not only depend on capital and labor but also on ideas, a state needs more than revenue and a high-quality workforce to function; it also needs up-to-date information about the society, the territory, and the population it governs. Without information, the agents of the state simply cannot determine how to use policy instruments effectively. This is why Scott (1998), for example, emphasizes the importance of information-gathering institutions for the development of the modern state (see also Lee and Zhang 2016). This is also where it becomes clear that Soifer’s idea of “state reach” is an integral part of our theory, for unlike revenue and human capital,

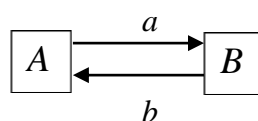
which can potentially be accumulated and concentrated in the capital, a state cannot broadcast power effectively over a large territory and a large population without having information about that territory and that population. Whereas revenue and human capital are, in Soifer’s (2008, 236) terms, “national capabilities” that may be “invariable within a particular country,” information gathering must extend widely across the territory.

IV Concepts

One of the advantages of the approach to state capacity that we explained in the previous section is that it becomes possible to clarify the often-blurred lines between state capacity and other concepts. We begin with the distinction between state capacity and state *autonomy*.^{vii} To see the distinction, consider an analogy with the concept of judicial independence. On the one hand, judicial independence is a form of autonomy. Following Ríos-Figueroa and Staton (2014, 107), judicial independence can be defined as “a causal relationship between judicial preferences and out-comes” (so that “what judges think sincerely about the record controls the outcomes of their cases”). But judicial independence also requires influence, or, in other words, “that there is a causal relationship between how judges think the underlying conflict they are adjudicating should be resolved and how it is resolved in practice.” The autonomy criterion requires that judges are not controlled, the influence criterion that they themselves are in control (so that their decisions are not “routinely ignored or poorly implemented”).

The state itself can be subjected to the same twin criteria: its autonomy reflects the extent to which it is not controlled by external forces; its capacity reflects the extent to which it controls the outcomes it attempts to achieve. These relationships can be pictured in a bidirectional causal diagram (Figure 2). Let the state be A , and let B be some combination of individuals or groups in society. State capacity then implies a causal arrow pointing from A to B ($a > 0$). State autonomy, by contrast, implies the absence of a causal arrow point from B to A ($b = 0$).

FIGURE 2. Capacity vs. Autonomy



We have already referred to the correspondence between the concept of state capacity as power and Mann's concept of infrastructural power. There is also a close correspondence between our conception of state autonomy and what Mann (1984) calls the "despotic power" of the state (if the state is autonomous, its despotic power is high; if the state is not autonomous, so that $b > 0$, despotic power is low), although the concepts are not identical. In the words of Soifer and vom Hau (2008, 223), "The state's despotic power refers to the range of policies that it can order: in Mann's analogy from *Alice in Wonderland*, the despotic power of the Red Queen refers to her ability to *order* one's head to be cut off." Infrastructural power, by contrast, "captures the ability of the Red Queen to hunt down Alice."

Both autonomy and state capacity can be treated as forms of power in the counterfactual-causal sense defined by Dahl. The difference is in the direction of the relationship. In the figure above, autonomy is low when B (society) can get A (the state) to do something that A would not otherwise do; state capacity is high when A (the state) can get B (society, or members of society) to do what B would not otherwise do.^{viii}

Mann's concept of despotic power and the concept of state autonomy are also both related to the concept of a political *regime*. Following O'Donnell (2001, 14), we can define a regime as "the patterns, formal or informal and explicit or implicit, that determine the channels of access to principal governmental positions." If, for the sake of argument, we use O'Donnell's concept of "government" interchangeably with the concept of a "state," a "regime" is primarily defined by who controls the state; in other words, the regime question is a question of state autonomy.

Consider a democratic regime, for example. At its most general level, "rule by the people" implies that at least a minimal amount of control over the state is exercised by the citizens. In a direct democracy, that control is more or less perfect: what the state "wants" is directly determined by the collective decision of the citizens. In a representative democracy, control over the state is more indirect. As a minimum, however, representative democracy implies that citizens exercise some amount of control over the personnel occupying key state positions (which may or may not imply control over the actual policies that are pursued; see Hadenius 1992, 14).

The political regime – and, more generally, how states and societies interact – also affects the *legitimacy* that leaders and states enjoy. Since legitimacy is an internalized motivation to obey, the ability of states to make citizens comply depends, at least indirectly, on the regime, and the state's autonomy, not only on state capacity narrowly defined. However, we deem it best to treat legitimacy and state capacity as distinct concepts. Only then will

we be able to examine the interactive effect of legitimacy and state capacity, and their historical co-evolution.^{ix} Consider the dimension of political legitimacy that Margaret Levi (1988, 53) calls “quasi-voluntary compliance,” which is a disposition to comply with authority as long as the ruler can convince its subjects that a policy is “fair” in the sense that all citizens, or at least most of them, are expected to do their part. This plausible account of how political authority is exercised depends on the sort of analytical distinction between legitimacy and capacity (or power) that we make here. “Quasi-voluntary compliance,” Levi writes, “rests on the effectiveness of sanctions when enough constituents are already cooperating. Rulers can then focus scarce resources on those constituents most likely to be noncompliant” (1988, 54). Legitimacy and power combine; they’re not the same thing.

V Theory

Conceptual clarity is not the only advantage of the approach we propose. Another advantage is theoretical: we believe that treating state capacity as a form of power that is exercised by using specific resources to enhance the effectiveness of specific policy instruments suggests promising new avenues for theories of the state.

Note that in Figure 1, the arrows from “policy instruments” point in two directions: both horizontally, directly to the outcome, and vertically, to the resources. Following the logic of Besley’s and Persson’s (2011) argument, we can think of the government as making a choice, at each point in time, between using state resources and policy instruments to achieve the policy outcomes that the government desires at time t (the right-pointing arrow) or to invest in new resources that can be used at time $t + 1$ to improve the effectiveness of the policies that the government adopts then (the downward-pointing arrow). As Pierson (2015, 130) argues, “The exercise of authority is not just an exercise of power; it is potentially a way of generating power.” The accumulation of resources is thus an outcome of past policy decisions. But there is a crucial difference between investments in state resources – by increasing revenue, reforming the bureaucracy, or investing in information capacity – and other types of policy outcomes: doing the former makes it easier to achieve the latter in the future. Investments in state resources can therefore be used as a more distinct definition of what it means to “build” or “make” a state than is now available in the literature (cf. Fukuyama 2004 and Vu 2010).

To Besley's and Persson's general account of such political investments, we add the qualification that states do not invest in state capacity in the abstract; they invest in specific state resources that can be used to enhance the effectiveness of specific policy instruments. This matters since resources are not entirely fungible. In theory, it is possible to think of a state that is so capable that the government is unconstrained when selecting among policies (**p**) that can be used to produce the outcomes the government wants to achieve (**y**): the state can implement any policy effectively. In the real world, however, the strength of the relationship between **p** and **y** is likely to vary across policy instruments and outcomes: no state implements all kinds of policies equally well or achieves all outcomes equally effectively. As Fukuyama (2004) has noted, there are states that are highly effective in some areas but not in others. This suggests that there are different bundles of state resources and policy instruments that share certain qualities and sources of variation. Since resources are not neutral, but more useful for the exercise of some forms of state power than others, we should always think of state making (or state building) as investing in certain types, or dimensions, of state capacity.

Beyond this more refined way of theorizing state making, our approach also suggests that theories of state development should consider how different policy instruments and different resources combine. The reason is that the resources that are required to use "carrots" effectively are different from the sorts of resources that are required to use "sticks" effectively – and to use "sermons" effectively, yet another set of resources is needed.

To use sticks effectively, the state needs to control the means of violence (police forces, prisons, etc.), and, returning to our earlier formalization, it needs to be able to separate those who do y from those who do $\sim y$ (to punish the latter). This policy instrument is relatively simple to use, but it has many limitations; coercion is a crude way of exercising state power. Most importantly, it is not possible to use coercion if the individual-level outcome is difficult to observe (when it is difficult to separate those who comply from those who do not).

To use carrots effectively, the state needs detailed information about the economic circumstances of individual citizens. It also needs policy instruments that can be used to provide economic and other incentives (that is, services and transfers that are sufficiently sophisticated to reward those who comply). Most importantly, it needs material resources (revenue) that can be redistributed for this purpose. Once incentives are structured effectively, however, it is not necessary to monitor each individual case, which makes carrots more flexible than sticks; the best incentive systems are self-sustaining, in the sense that citizens who do y are automatically rewarded.

To use sermons effectively, the state needs to have access to means of communication and the transfer of knowledge. It also needs information about the psychological dispositions of individuals and groups in society. Sermons have the advantage over carrots and sticks that they require no information whatsoever about which citizens actually do y and which citizens actually do $\sim y$. On the other hand, there are good reasons to believe that sermons are a difficult instrument to use in pluralistic societies where the state does not monopolize the means of communication.

Distinguishing among policy instruments and resources in this manner helps us see that the most significant change in state capacity during the past two hundred years is not simply that the state is more powerful; it is that the state exercises power in more *diverse ways*. Contemporary states rely less exclusively on “sticks” than past states did, and more on “carrots.” In a recent paper, d’Arcy and Nistotskaya (2016) argue that states need both “teeth” (coercion, an instrument) and “eyes” (information, a resource). We cannot but agree. But we would add as an important qualification that high-capacity modern states command so many resources that they rarely need to bare their teeth at all.

This shift from “sticks” to “carrots” is distinctive for the development of state power in high-growth societies, for carrots require more resources. “Industrial society,” Gellner (2008, 22) argues, “is the only society ever to live by and rely on sustained and perpetual growth,” and its “favored mode of social control is universal Danegeld, buying off social aggression with material enhancement.” The increase in the economic strength of the state in the modern economy – combined with the emergence of professional bureaucracies capable of administering tax systems, social insurance systems, and other costly public programs – has encouraged the widespread use of “carrots” rather than “sticks” as the main method of achieving desired political outcomes.

VI Measurement

The problem of how to study state capacity empirically is of mounting concern to social scientists.^x Our argument has important implications for how one should address this problem. In our framework, state capacity is defined as the strength of the causal relationship between the policies governments adopt and the (intended) effects of those policies. Crucially, this means that state capacity as such cannot be measured, for, by definition, causal relationships

cannot be observed. What *can* be observed, however, are the resources that states use to enhance their power, such as revenue, human capital, and information.

Instead of trying to measure state capacity as such, then, the solution we propose is to measure the “inputs” of state capacity: state resources that are known to increase the ability of state organizations to carry out public policies. To construct an indicator of state capacity, we thus propose to collect data on government revenue, the quality of the bureaucracy (human capital), and information-gathering institutions, and then treat state capacity as a function of these underlying factors.

It is true that studying the inputs of state capacity is merely an indirect approach to the study of state capacity as such, for the possession of certain resources cannot be equated with their effective use (Soifer and vom Hau 2008, 228; Baldwin 1979). But it is a more promising approach, in our view, than the more common approach in the contemporary literature, which is to infer state capacity from its outcomes, or effects. Many empirical studies simply equate high state capacity with policy outcomes such as high tax compliance or low levels of violence—which risks making any attempt to use the concept of state capacity to explain those policy outcomes tautological.

A key challenge that remains is how to aggregate the available data on individual state resources into an index that represents state capacity. Our view is that the index should be a multiplicative function of the inputs. As we discussed above, one of the ideas of this paper is that we can think of the state apparatus as an organization, or even a sort of machine, that turns inputs (resources) into outputs (state capacity, or power). The relationship between resources and state capacity can therefore be thought of as a production function, and almost all production functions, such as the well-known Cobb-Douglas function (1928), are multiplicative. A multiplicative aggregation function captures the idea that a state cannot effectively compensate for the lack of one resource by investing in another. For example, a state that has no information about the territory and the population it governs will not be able to make effective use of its revenue. Put differently, what we propose is that when one studies state capacity, the overall index value should depend mainly on the weakest link in the state’s political “production chain.”

Another implication of our approach for empirical research is that the dimensions in which state capacity can vary need to be elaborated more precisely than they are in the existing literature. One distinction that is commonly made is that between *coercive*, *extractive* and *administrative* capacity (Soifer 2012; Hanson and Sigman 2013). Coercive capacity typically includes the “Weberian core”: the monopoly of violence within a given

territory. Extractive capacity is similar to what we have called “fiscal” capacity (the ability to raise revenue). Administrative capacity is somewhat more loosely defined, but it could perhaps be thought of as the “productivity” of the state’s personnel. This tripartite division may be useful for some purposes, but from our perspective, it rests on a category mistake: we treat “coercion” as a *policy instrument*, “administrative capacity” as a *resource* that states use to improve the effectiveness of policy instruments, and “extraction” as a means of *generating new resources*.

VII Conclusion

In this paper, we have developed a new approach to state capacity that is based on the premise that state capacity is best understood as a form of power. This approach has important implications, which are often overlooked. In particular, it has implications for conceptualization, theory, and measurement. We have identified those implications and developed an argument that helps to resolve many conceptual and methodological difficulties in the existing literature on state capacity.

When it comes to conceptualization, our main advice is to define state capacity narrowly, as the strength of the causal relationship between policies and outcomes, and to distinguish between the policy instruments that governments use and the re-sources they deploy to make those instruments effective. Concepts such as democracy, quality of government, and legitimacy should be treated as distinct from the concept of state capacity, which is the ability of states to coerce, incentivize, or persuade members of society who would not otherwise comply with government policy. A full analysis of the exercise of political authority must also take legitimacy into account, for as Weber (1978) knew, the state’s authority relies on both legitimacy and power. But there is an interesting historical relationship between legitimacy and state capacity, and that relationship can only be analyzed if the concepts are kept distinct.

With respect to theory, our advice is to theorize the relationship between different types of policy instruments – such as carrots (or incentives), sticks (or coercion), and sermons (or propaganda) – and state resources such as revenue, human capital, and information. We also concur with Besley’s and Persson’s suggestion (2011) that the development of state capacity should be treated an investment problem: at any given point in time, political decision-makers face a choice between pursuing immediate policy goals and investing

in future state capacity. The latter is how we define state making. But we also add to Besley's and Persson's account that what political leaders invest in are specific resources, not state capacity in the abstract.

Finally, our approach has important implications for empirical research: in the framework that we propose in this paper, state capacity is a causal effect, and as such it cannot be measured. What can be measured, however, are the resources states can deploy to make their policies effective. In our view, measuring such resources is the way forward for empirical work on state capacity.

VIII References

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Endnotes

ⁱ See, for example, World Bank (1997); Evans and Rauch (1999); Bockstette, Chanda and Putterman (2002); Fukuyama (2004, 2013); Sobek (2010); and Besley and Persson (2011).

ⁱⁱ For reviews of the broad similarities between the “three faces of power,” see Pierson (2015), 125–131.

ⁱⁱⁱ We use boldface to denote vectors: \mathbf{p} are *all* the policies that the state seeks to implement; p is an individual policy, and so on. Our formalization is different but conceptually akin to Huber and McCarty’s (2004) model of bureaucratic capacity, in which an action chosen by an agency is also affected by a random adjustment reflecting its capacity for effective performance. The variance of the adjustment (Ω in their model) represents bureaucratic incapacity. In terms of our framework, that variance term – assuming it is not policy-specific – corresponds to a weaker causal effect of \mathbf{p} on \mathbf{y} .

^{iv} It is in principle possible to think of other ways for A to make B do y . For example, A can sometimes make it physically impossible for B to achieve $\sim y$, removing $\sim y$ from the menu of options that B chooses from. But it should be possible, nevertheless, to sort all such possibilities under the three main headings of coercion, incentives, or propaganda. The example we just mentioned, for instance, can be seen as a form of coercion.

^v If citizens change their preferences ($u \rightarrow u^*$) as the result of a process of democratic deliberation, we do not treat that event as an exercise of state capacity. But if citizens change their preferences as the result of a government program that is design to promote certain ideas and values, we *do* treat that event as an exercise of state capacity.

^{vi} Defining the state as an organization implies that we do not assume that the state is a unitary actor. Sometimes the state is better viewed as an arena where a range of actors struggles for mastery (Skocpol 1985; Vu 2010). The most important relationship that we would need to account for, if we opened up the black box of the “state,” is arguably the relationship between the government (the “rulers” or “politicians”) and the bureaucracy (the “state administrators”). A more elaborate analysis of state capacity would require a theory of the *tripartite* relationship between the government, the bureaucracy and society (instead of the *binary* relationship described in Figure 1). We leave that for another day, however. In this paper, we do not examine the *intra-state* power relationship between the government and the bureaucracy. Instead, we treat the bureaucracy as a resource that “the state” can employ in order to achieve its goals.

^{vii} We want to make clear at the outset that by *state* autonomy we do not imply *bureaucratic* autonomy, which is typically defined as “policymaking power” of bureaucratic agencies that is independent of the politicians in the legislature and organized interests, or “the level of discretion that the legislature delegates to the agency”, as in the formal modeling literature on delegation and control (Moe 2012, 17). As stated in the previous footnote, a more elaborate theory of state capacity would also include the relationship between the government and the bureaucracy, but we here make the simplifying assumption that the latter can primarily be seen as a resource in the hands of the former.

^{viii} One implication of this argument is that what defines a free society – with a democratic, constitutional government – is not necessarily that infrastructural power or state capacity are constrained (in other words, that a is low); what democratic, constitutional government requires is that the exercise of infrastructural power is matched and controlled by a flow of power in the other direction ($a \approx b$). Another way of expressing the same idea is this (using the terms in Figure 2): What turns us from subjects to citizens is not that a is low, but that b is high.

^{ix} We believe that our narrow focus on the power of (agents of) the state over (members of) society is justified even if the ability of governments and state agencies to foster cooperative relationships with civil society is essential for the implementation of many types of public policies (see, e.g., Migdal 1988). The ability of governments and state agencies to foster cooperative relationships is not independent of state capacity. Scholars of neocorporatism in Western Europe have shown, for instance, that corporatist bargains between states and interest organizations depend on the power of the state for their formulation and enforcement (Hemerijck and Vail 2005).

^x See especially Soifer (2008, 2012), Hendrix (2010), Hanson and Sigman (2013), Saylor (2013), Fukuyama (2013), D’Arcy and Nistotskaya (2016), and Lee and Zhang (2017).