

## **Dispersed and Centralized Authority systems**

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### **1. Background: Dispersed and Centralized Authority**

All human societies depend upon a level and scale of cooperation among non-kin individuals that is extremely high compared to that achieved by vertebrate species. Yet, again unlike other vertebrates, human societies vary greatly in respect to the extent of cooperation and how they organize cooperation. Societies are sometimes organized as top-down hierarchical pyramids in which the will of a few individuals constrains the range of choices available to other members of the community (like most higher primates: Boehm 1999). In other circumstances, people organize themselves into extensive networks of dispersed cooperation, sometimes lacking any centralized locus of command and control (like ants: Gordon 1999). In human dispersed-cooperation networks, the choices of many diverse individuals determine outcomes.

In centralized system, authority is readily modeled as a pyramid, with a few individuals at the top, many at the bottom, and a clear hierarchy of levels in between, with effective command and control at each subsidiary level. A dispersed system is one in which the pyramid model does not represent power relations at a useful level of abstraction. Thus, a region featuring multiple independent states, not structured by clientistic relationships among states, is not well modeled as a pyramid; an imperial state in which obedience, social deference, and resources reliably flow to a single center, is readily characterized as a pyramid. Within a region defined by a single state (nation or empire), absolutist monarchical and oligarchic governments are readily modeled as pyramids; democracies and mixed governmental systems in which the executive power is effectively constrained, are not.

Of course, most real-world systems will be in some sense hybrids. Some systems may be so thoroughly hybridized as to fall outside any defensible scheme based on the binary of centralized/dispersed authority. For example, it is unclear whether modern “polyarchic” (Dahl 1971) systems, such as the contemporary U.S., fit within the binary taxonomy (although see below). But the premise of the project is that enough historically important systems of organization can be characterized by the dispersed/centralized binary to render it analytically useful for exploring persistence and change over time.

Systems of cooperation operate at different scales. Schematically, within a given region characterized by a substantial level of shared culture and institutions, authority may be either centralized or dispersed at regional and local levels. Thus, the authority structure within a given region at a given point in time may be represented (again, very schematically) by a simple four box matrix.

Dispersed regionally Dispersed locally (DD)	Centralized regionally Dispersed locally (CD)
Dispersed regionally Centralized locally (DC)	Centralized regionally Centralized locally (CC)

Model systems:

DD: Greek city-state ecology: 8<sup>th</sup>-4<sup>th</sup> centuries BCE (Hansen 2006)

CD: 17<sup>th</sup> century Russia (Mironov 2000, Kivelson 1996); traditional Afghanistan (Barfield, this colloquium)

DC: Warring States China

CC: Han China

Assuming that actual societies (or, *mutatis mutandis* other organizational systems, e.g. firms) can plausibly be characterized by one of the four boxes, we may ask what difference the form of authority actually makes. We may attempt, empirically, to assess how much effect the independent variable of organizational form has on various dependent variables: To what extent are societies that fit into in a given box characterized by recognizable and similar social mores, ideologies, values, rates of technological innovation, economic growth? Does authority form affect political thought and discourse? For example, does (as we might predict) political writing within a system of more centralized authority focus on the nature and locus of sovereignty? Do writers in more dispersed authority systems focus instead on citizens and citizenship?

We may also investigate whether specific conditions foster the emergence of each of the four forms of authority and/or sustain them. Are there identifiable conditions under which one of the four forms of authority will predictably be transformed into another form? Over time, and given advances of human culture and technology, can one or more of these four forms be shown to be more or less adaptive? On the four-box diagram, would arrows indicating historical change tend to point in one direction? If so, is the dominant direction left/right (change at regional level)? Up/down (change at local level)? Or even diagonal? While some of these questions have been posed, with reference to specific historical periods, by literatures concerned with state formation and competition (Spruyt 1994, Stasavage 2011), there has been relatively little comparative work, across historical and geographic regions, and across different forms of social organization (states, firms, etc.).

Political theorists have long debated whether one or the other of these organizational forms, centralized or dispersed authority, is more in accord with human nature and thus more conducive to human flourishing. Aristotle (and a republican tradition extending from Livy and Tacitus, through Machiavelli, to the English and American theorists of the 17th and 18th centuries) argued for the naturalness of dispersed authority. Thomas Hobbes, followed by a number of 20th century political theorists, argued that some form of centralized authority is both inevitable and essential for human flourishing. We suggest that this important question can be resolved only through proper attention to

evidence, both carefully chosen and well documented historical cases and more systematic empirical studies.

The distinction between dispersed-cooperation networks and centralized-cooperation pyramids informs us about the potential for human flourishing, both in material and moral senses. Our working hypothesis is that pyramids and dispersed ecologies are associated with the development of distinctly different systems of moral value and with different manifestations of human creativity. Dispersed cooperation seems to favor democratic values of individual freedom, equality, and human dignity. They also involve open access to rights, participation (in politics and economics), and to create organizations. In dispersed ecologies, creativity and innovation are driven by competition and emulation. Centralized cooperation pyramids seem to favor authoritarian values of hierarchy, loyalty, obedience. These societies also emphasize limited access to rights, participation and to organizations. In pyramids, creativity is grounded in learning and tradition. It remains an open question whether the two systems tend to develop different conceptions of interpersonal ethics, or of metaphysics, divinity, and the afterlife.

In terms of material flourishing, both systems can achieve economic growth and sophisticated forms of high culture, but they appear to achieve these ends quite differently. Historically, pyramids have been the dominant form of society in the world, with a few exceptions (e.g., classical Greece), while the modern world is dominated by dispersed ecologies even if most states remain pyramids (see North, Wallis, and Weingast 2009 on limited access orders vs open access orders).

The principal approach for explaining why a dispersed or a centralized cooperation system will emerge is based on Ronald Coase's work on transactions costs and on the theory of the firm. Asking why firms exist, Coase answered that a firm (centralized cooperation) will emerge when transaction costs become sufficiently high that free exchanges in an open market (dispersed cooperation) offer less gain than is available under conditions of centralized authority, even in the face of inevitable organizational and management costs. This approach has been adapted to answer the question of the origin of states (North 1981, 1990) and international regimes (Keohane 1984, 2002).

The Coasian approach is a very good starting point. Yet, as recent work by a number of scholars working the interstices between history, political science, political philosophy, and economics suggests, the basic model, grounded in the economic conditions of twentieth-century industrial production, fails to account for many features of well studied premodern historical societies (Allen 2003, 2006; Acemoglu et al. 2005; Clark 2007; North, Wallis, Weingast 2009; Ober 2008; Morris forthcoming). Nor can it adequately account for the emergence of contemporary "dispersed cooperation/non-market" phenomena: social networking, open-source software, etc. (Benkler 2006). Put simply, we have too little understanding of the conditions under which societies will be structured as pyramids vs those where they will be structured as dispersed ecologies. Finally, the Coase model largely ignores values. Big questions go unasked: How are

values created and by whom? Why there are culturally distinct notions of moral value? What are the dynamics of value?

## 2. Elements of the Logic of Dispersed Ecologies

Dispersed regional ecologies come in many sizes and shapes. They include federal nations (which may be DD, DC, or CD in form), ecologies of republican/city-states (classical Greece – a strong example of DD, Northern Italy during the Renaissance – DD-to-DC), open markets, peer production (open source software), competition among states and jurisdictions.

A dispersed authority regional system may feature a great number of local systems (Greek city-state ecology, composed of ca 1000 more or less independent states across a population of ca. 7-10m persons). Or it may feature only a few local systems (Warring States China, comprised of four major states). Hybrid dispersed regional systems may be comprised of a few major local systems and a number of minor systems (Hellenistic Greece, ca. 300-200 BCE, comprised of three major imperial states, and many smaller states: kingdoms, city-states, and federations).

By definition, authority in all dispersed regional ecologies is decentralized – many relatively independent organizations or states exist. They differ considerably in the *degree* to which authority is decentralized at the regional or at the local level. Central authority may be almost completely lacking at regional level and weak at local levels, as in the DD-form classical Greek city-state ecology. Alternatively, dispersed authority systems may feature relatively strong centers that have the authority to tax, to provide a range of public goods (such as security, a monetary union, and a common market), and to police the behavior of member states if they violate the rules of the dispersed authority system, as in the common market in the United States in the late 18<sup>th</sup> and most of the 19<sup>th</sup> century. Examples exist in between, including the today's European Union where relatively sovereign nations collaborate within an institutional structure that constrains the sovereign authority of each nation in particular ways. Many modern international organizations, such as the WTO, function as even more dispersed ecologies.

A major problem in dispersed authority systems with creating a central unit is the control over the center. If a set of states in a dispersed ecology seek to form some form of union that has the ability to provide ecology-wide public goods, then how are they to be assured that the centralized authority will act as the states intend rather than using its power to exploit the states or to exploit some to the advantage of others? Absent a solution to this problem, the constituent states will be reluctant to grant power to the center so that it remains weak. Indeed, Riker (1987) emphasized that, until the American founding, all federal unions remained very dispersed with a very weak center, more leagues than modern federal states. He credits the Americans with inventing a

new form of organization that he called centralized federalism.<sup>1</sup> This type of federal union had the means to provide national public goods, such as security, a sound monetary system, and a common market, but was constrained by a range of means that limited the central government's authority. Absent the means to limit the centralized authority in ways tailored to the circumstances of a particular dispersed ecology means that the constituent states of the dispersed ecology are likely to keep the center weak, as in the Greek *koina*, the 17<sup>th</sup> century Dutch Republic, the United States under the Articles of Confederation, and the modern European Union.

**Characteristics of dispersed authorities.** Most of the successful (e.g., relatively prosperous and long lasting) dispersed ecologies of states are characterized by the conditions of market-preserving federalism (Weingast 1995). Besides a hierarchy of authority for providing system-wide public goods (Riker 1964), these ecologies typically have:

- Dispersed authority over property rights, local public goods, and the economy;
- A common market, with low or no internal trade barriers, relatively free flow of capital and labor, and often a common monetary system, weights and measures, and of laws governing commercial transactions. Citizens from one jurisdiction tend to have rights in other jurisdictions.
- Fiscal independence and the so-called hard budget constraint, which requires that constituent states in a dispersed ecology are largely or wholly responsible for their own fiscal decisions.
- These states also typically have forms of incentive systems that foster and institutionalize cooperation, helping to bind the states to one another.

**Effects of dispersed authorities.** Several important features or characteristics emerge in thriving dispersed ecologies of states. As Inman and Rubinfeld (1997) emphasize in their important work on federalism, dispersed ecologies exhibit three principles: efficient allocation of resources; political participation, and they articulate and protect basic liberties and freedoms: Security: Riker (1964) emphasizes that a necessary condition for the survival of dispersed ecologies is that they have the ability to defend themselves against hostile neighbors. Indeed, many famous dispersed ecologies disappeared precisely because they could not defend themselves against much larger, hostile neighbors, notably the classic Greek Poleis and the city-state of Renaissance Italy. More generally, an ecology of small states tends to form larger units in an effort to provide ecology-wide public goods, such as security or a common market.

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<sup>1</sup>Notice that the center in what Riker (1987) calls centralized federalism is far weaker than the center in a great many federal systems today, including the India, Mexico, Russia, the United States, and Venezuela.

1. Competition among states. A central feature of a market-preserving dispersed ecology is that it places states in the ecology in competition with one another, especially economic competition. The constituent states in a dispersed ecology need to adapt to survive. Those states with better institutions, policies, public goods, and, generally, that better manage social cooperation have a competitive advantage in this competition.

This logic implies that the principal features, institutions and values that are typical of states in these ecologies – including a system of property rights, open access to organizations, rule of law, emerge and survive because they all serve a purpose in the larger competition among states. An important feature of competition and independent authority is that each local unit in the ecology has an incentive to tailor public goods, property rights, and other public policies to suit their circumstances.

2. Values. An important feature of many of the important dispersed ecologies is that they produce strong values associated with equality: open access to rights and organizations, democratic participation, impersonality, rule of law, citizenship, and equality of opportunity. These features all contribute to the survival of these ecologies, but we only dimly understand the mechanisms of how.
3. Adaptive efficiency (North 2005, Mital 2010). All states face dilemmas and crises. Because of competition and open access to participation (and organizations), dispersed ecologies generate a greater ability to utilize decentralized knowledge (Ober 2008; North, Wallis, and Weingast 2009).
4. Appropriate assignment of functions to levels of authority – the assignment problem. Economists have long emphasized the importance of the efficient assignment of authority to different levels of government (Musgrave 1959, Oates 1972). Local governments should have authority over local public goods, such as local infrastructure and utilities, while central governments should have authority over national or system-wide public goods, such as security and the common market. A mismatch in assignment induces inefficiencies. In particular, too many pyramid states have inadequate local authority and hence inadequate provision of local public goods. The appropriate allocation of powers to the different levels of government is critical to the freedom and prosperity in dispersed ecologies.

**Open questions.** Prominent questions to which we have inadequate answers:

- Q1: What determines the conditions under which dispersed ecologies emerge and thrive? In particular, why do these ecologies thrive in very specific periods in history but not others?
- Q2: What are the mechanisms that sustain moral values and how do these values contribute to the survival of the both the dispersed ecology and its constituent states?

- Q3: Has the knowledge (theories) about how to construct successful dispersed ecologies increased over time? In particular, are modern dispersed ecologies better able to scale up in the sense of growing larger so that they can defend themselves against hostile neighbors? The contrast between modern dispersed ecologies – including the Dutch Republic of the 16<sup>th</sup> and 17<sup>th</sup> centuries, the United States, and the European Union – with those of classical Greece and Renaissance Italy suggests that the answer is yes.<sup>2</sup>
- Q4: Missing from the literature is an understanding of how a dispersed ecology creates a supra organization that doesn't expropriate or threaten its members. This is the problem of how states in a dispersed ecology can create an ecology-wide governance structure that at once provides some critical public goods (such as security, common market, common currency, common units of account, weights, and measures) while allowing the states to remain autonomous in virtually all other spheres. This problem arises in many historic cases: the problem of vesting more power in Greek *koina*, the American states at the founding (notice the Articles of Confederation and the Anti-Federalists' arguments against the Constitution), a principal problem within the European Union, and the main reason the UN or World Courts have never been vested with greater powers and sanctions.

Prominent theorists of dispersed ecologies include Yochai Benkler, F.A. Hayek, Douglass North, William Riker, Charles Tiebout, and Wallace Oates.

### 3. Centralized Authority Summary

#### A. Patterns in the History of Centralized Authority

Centralized and dispersed authority systems have not been randomly distributed through time and space. Simplifying enormously, we see three main phases:

- a. Dispersed-authority hunter-gatherers: the dominant form of society from the origins of modern humans (somewhere between 200,000 and 50,000 years ago) to the spread of agriculture (beginning about 11,000 years ago).
- b. Centralized-authority agriculturalists: the dominant form of society from the spread of agriculture (beginning about 11,000 years ago) to the spread of fossil-fuel economies (beginning about 200 years ago).
- c. Competing dispersed- and centralized-authority fossil-fuel economies (beginning about 200 years ago), with a general trend toward dispersed-authority systems, particularly since about 20 years ago.

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<sup>2</sup>Riker's (1987) in "the invention of centralized federalism" at the American founding suggests that the answer is yes.

Each phase began with innovations in one part of the world (dispersed-authority hunter-gatherers in eastern/southern Africa; centralized-authority agriculturalists in southwest Asia; dispersed-authority fossil-fuel economies in northwest Europe) then spread over most of the rest of the globe.

### **B. The Emergence of Centralized Authority**

All species of animals except humans have a single form of authority (dispersed among ants, centralized among chimpanzees, etc.). In one sense, the explanation for this human exceptionalism seems obvious: while modern humans are not the only animals to have something we can call culture, they do seem to be the only ones in which cultural change is cumulative. However, we still do not know how and why dispersed- and centralized-authority systems emerge from each other. Nor do we know why dispersed- and centralized-authority systems are so strongly correlated with hunter-gatherer and agrarian economies respectively; nor whether in the long run dispersed-authority systems will turn out to be equally strongly correlated with fossil-fuel economies.

### **C. The Distinctiveness of Dispersed and Centralized Authority**

Dispersed and centralized authority are ideal types; neither has ever existed in a pure form. If we are to answer our main questions about the emergence of different forms of cooperation we must develop sharper analytical tools, recognizing the persistence of dispersed authority within largely centralized systems and hierarchical features within largely dispersed systems. Classical Athens, for instance, combined highly democratic male-only political institutions with large-scale slavery and unusual levels of gender inequality, while the economic institutions of the Old Assyrian, Roman, and Song-dynasty Chinese empires were in many respects very dispersed.

### **D. Core Questions**

We identify five major clusters of questions. Others may arise in discussion. Each of the five clusters is part of one or more classic debates in its field (human evolution, anthropological archaeology, ancient history, medieval-modern history, political science). Some of these questions have been argued over for 200+ years; others have been defined much more recently. It is unrealistic to expect that we will answer them definitively, but they remain the fundamental issues in explaining the emergence of dispersed and centralized authority.

- a. The earliest *Homo sapiens*, in Africa between 200,000 and 60,000 years ago, probably lived in dispersed-authority hunter-gatherer bands, although our biological closest kin, also in Africa, mostly live in centralized troops. How and why did *Homo* develop in this direction? Was the social organization of the last shared ancestor between *H. sapiens* and the great apes more chimp-like or more human-like? Can we identify specific developments (e.g., bipedalism, meat-eating, brain size, tool-making, cooking, language) associated with the emergence of dispersed-authority human bands? Did any species of *Australopithecus* or *Homo* prior to *H. sapiens* have cumulative culture? Is *H.*

- sapiens* the only species ever to have existed that could shift between dispersed and centralized authority?
- b. How did centralized-authority states emerge from dispersed-authority band and village societies? This happened first in southwest Asia in the fourth millennium BCE; was the process the same in every region of pristine state formation? Why were dispersed-authority complex societies apparently so uncompetitive? Why do so many early states show signs of relying heavily on ideological authority, seeing their rulers as in some sense divine? What was the relationship between warfare and ideological power in the earliest states? Did the structures of archaic states emerge relatively abruptly or can their roots be traced back to the Ice Age? Do managerial or conflict models make most sense of the processes?
  - c. How did mega-empires with populations in the tens of millions emerge from competitive networks of states? This happened first in southwest Asia in the first millennium BCE; was the process the same in every region of empire-formation? Why is there more evidence for pockets of complex structures with dispersed authority in the first millennia BCE and CE than in pre-1000 BCE states? Is there a long-term pattern of highly centralized early states followed by a long drift back toward dispersed authority? How much did authority structures actually change in Eurasia between the empires of the first millennium BCE (e.g., Roman, Han, Mauryan, Assyrian, Achaemenid) and those of the first and early second millennium CE (e.g., Tang to Ming China, Gupta India, the Umayyad and Abbasid caliphates, even the Ottomans)? Do pre-Columbian New World states have more in common with the archaic (pre-1000 BCE) states of Eurasia or with Eurasia's agrarian empires of the first millennia BCE and CE? Is there a limit on the economic and intellectual development of centralized-authority agrarian empires?
  - d. Why has no centralized-authority empire since 500 CE united the competing states of western Eurasia as thoroughly as the Roman Empire did in the first centuries CE, while Iran, South Asia, and East Asia have seen several centralized-authority empires on roughly the same scale as the Achaemenids, Mauryans, and Han? Did the Umayyad and Abbasid caliphates and Seljuk Turks fail to hold large empires together because they were unable to centralize authority enough? Why did the Byzantines, Franks, Habsburgs, Bourbons, Napoleon, and Hitler fail to conquer and hold equivalently large empires? How different were the British, French, and other maritime empires of the 17th through 20th centuries from previous forms of centralized-authority empire?
  - e. Why did dispersed-authority states in northwest Europe and their overseas settler colonies prove so successful in the 17th through 20th centuries CE? Is there a necessary tie between dispersed authority and fossil-fuel economies? Does the explosive growth of relatively centralized East Asian economies in the late 20th and 21st centuries point to a shift away from dispersed authority toward a world dominated by a more hierarchical, statist "Beijing consensus"? What will the ongoing revolutions in genetics, nanotechnology, and robotics mean for dispersed and centralized authority in the 21st century?

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