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Differentials in wealth and decision-making power are now ubiquitous. Although it is tempting to accept inequality as somehow part of human nature, there is significant variation in the levels of inequality across human cultures, from very limited to very steep. Moreover, it is difficult to explain why an individual would voluntarily accept a subordinate position when evolutionary theory generally predicts striving for increased resources, status, and reproductive success. The questions of how and why inequality evolved thus continue to vex evolutionary social scientists.

Is human inequality novel or does it persist across the evolutionary history of the species? On the one hand, looking toward chimpanzees and bonobos, which are humans' closest living relatives and therefore likely to share certain traits, offers a bleak view of human nature. Chimpanzees and bonobos display persistent dominance hierarchies and large differentials in health and reproductive success. On the other hand, analysis of contemporary foragers (i.e., hunter-gatherers) who, by ethnographic analogy, are assumed to share features of environments and lifestyles that also characterized those of prehistoric humans, offers a different view. Relevant evidence is often summarized under the term *egalitarian*, to depict general tendencies for foragers to eschew persistent status and wealth differentials. Instead, cultural norms and institutions often militate against inequality, reining in would-be aggrandizers through ostracism and preferences for humility and widespread sharing.

Taken together, these lines of evidence suggest humans have potential for inequality (realized among many modern nation-states) as well as an ability to build norms and institutions that keep inequality in check (more common in contemporary foragers). This entry illuminates the evolution of persistent, institutionalized inequality, defined as “differential access to power or resources involving institutionalization of status hierarchies by hereditary privileges or positions such as social classes, castes, hereditary titles, or heritable differences in wealth.” Archaeological evidence generally supports the view that *persistent* inequality in material wealth and political decision-making appears to have been largely limited in size and scope until 10,000–12,000 years ago. This timing offers some clues as to what factors may promote versus impede the evolution of inequality, as it coincides with a reduction in climate variation that may have provided the stability that facilitated widespread transitions toward agriculture for the beginnings of persistent, institutionalized inequality we know well today.

Agriculture and Inequality

The contemporaneous evolution of agriculture and inequality offers support for the hypothesis that agriculture, per se, causes inequality. There are many pathways through which this relationship could develop, including production surpluses, less need for widespread sharing to reduce risks of nutritional shortfalls associated with foraging, and population expansion and settlement density resulting from increased fertility, which increase

competition for resources. However, evidence of inequality among some hunter-gatherer societies, including in association with highly productive marine and freshwater resources, as well as many relatively egalitarian horticultural societies, suggests that agriculture is neither necessary nor sufficient.

A more general model of the evolution of inequality posits that three factors—economic defensibility (ED), circumscription, and intergenerational wealth transmission (IWT)—provide the causal underpinnings for other factors that have empirically been shown to cause or escalate inequality. ED refers to the extent to which individual benefits of exclusive use exceed the costs associated with resource defense (claiming property rights). ED is enhanced by higher density and predictability of resources. Environments that are circumscribed (i.e., exhibit steep resource gradients) make it easier for resource owners to control subordinates who lack better options. IWT is facilitated by forms of wealth that are more easily passed to descendants, as well as by norms and institutions that facilitate such transfers; this codifies inequality by making it possible for lineages to hold on to wealth while excluding others.

Although economists often focus primarily on tangible assets, income, and debt, evolutionary scholars recognize the importance of many different types of resources to securing health, well-being, and reproductive success. Noetic wealth is wealth in knowledge or educational capital; somatic wealth is wealth that contributes to physical well-being, such as height, body fat, or immune function (i.e., *embodied capital*); relational wealth is wealth in social partnerships or social capital; finally, material wealth includes income, assets, and tangible goods (e.g., houses, cell phones) that help to support livelihoods. Material wealth, which carries the very high potential for ED and IWT, is especially prone to inequality, whereas embodied wealth, which has relatively low levels of IWT, is less unequal.

Thinking in these terms clarifies that agriculture should be expected to be associated with inequality, even if agriculture, per se, is not causal. Intensive agriculture reliant on plowing and/or irrigation produces food at far greater scales than other forms of subsistence (e.g., foraging, horticulture). Productive, arable land and any associated surpluses are relatively easily defended and transmitted from one generation to the next. The model also clarifies why inequality often appears in the absence of agriculture, such as among Northwest Coast Native Americans, whose use of fishing weirs and control of defensible salmon runs were associated with greater levels of inequality than among foragers residing in more homogenous or less productive environments.

Patrons, Clients, Leaders, and Followers

Who, specifically, stand to gain from the conditions that favor inequality and who are poised to submit to the authority of others? Managerial mutualism and patron–client are two of the best-known models that consider

the conditions that enable some individuals to benefit while excluding or exploiting others. Each posits that, at least initially, the net benefits of hierarchical cooperation outweigh any associated costs. However, whereas managerial mutualism focuses on the potential for leaders to overcome collective action problems (CAPs) in ways that are beneficial to groups, patron–client models focus on the conditions that render staying in a subordinate position a better alternative than leaving and trying one’s luck elsewhere. Finally, related scholarship focuses on the specific characteristics that make some individuals more or less likely to serve in authoritative positions and on the potential for political influence (leadership) to transition to coercion (dominance).

At the heart of the managerial mutualism model is the observation that cooperation is subject to constraints that can make it difficult to achieve. Such CAPs include selfishly motivated behaviors like free-riding on others’ efforts, problems organizing appropriate efforts (e.g., not showing up or not contributing effectively), and member–joiner conflicts that result when a person gains more from joining activities than existing members do from the would-be joiner’s efforts. Increases in group or settlement size, as was likely in the wake of agriculture, exacerbate CAPs. Managerial mutualism arises when leaders are rewarded for providing services that help to overcome these CAPs, such as directing efforts to ensure efficacy or issuing punishments when individuals do not perform as expected. Leaders may also produce group-level benefits associated with redistributing wealth and buffering against group risks such as crop failure.

Patron–client models focus on resource asymmetries that are used by elites to advantage themselves in systems of exchange with subordinate individuals. In heterogeneous environments, elites can leverage control of relatively high-quality or stable resource patches (e.g., fertile floodplains, productive fish habitats) to secure labor or other forms of support from subordinates in exchange for access to these high-quality resource patches. These systems are clearly more conducive to coercion than managerial mutualism, as subordinates are constrained by lack of resource control or outside options (i.e., their decisions are circumscribed). How coercive these systems are likely depends on the reasons enabling resource control—differential competitive ability (e.g., due to weapons, knowledge, social networks) may be more likely to generate coercive systems than those due to priority of access or temporary differences in kin-group size. Thus, resource heterogeneity, along with ED, together allows for systems of inequality to emerge. They are maintained in a persistent fashion when transmission patterns are institutionalized, such that inequalities perpetuate across generations.

Managerial mutualism and patron–client relationships may often reinforce each other. When leaders have greater coercive capacity (because they are also wealthy patrons or can draw on more coalitional support within their communities) they may be more effective in punishing free-riding, motivating contribution to collective action, mediating conflicts, or negotiating with outsiders. These benefits to group members from powerful leaders are also accompanied by increased risk of exploitation. Thus, group members tend to scrutinize their leaders for indication of unfairness in decision-making, which can be used to mobilize the community to

effect change in leadership. Such leverage on the part of community members over their leaders weakens as wealth inequalities widen. Furthermore, institutionalization of leader powers and leader succession can arise initially to make leadership more efficient but then provide leaders the capacity to expand their powers. With greater inequality in political decision-making comes greater material inequality and reproductive disparities, as leaders (often men in many conspicuous domains) claim special privileges in terms of polygyny or access to resources.

Effect of Competition Among Groups on Inequality

The evolution of inequality affects and is affected by interactions not only among individuals but also by inter-group interactions. For example, warfare and other processes can promote inequality when unequal groups with effective hierarchical structures outperform equal ones. Indeed, warfare has led to the dissemination of coercive political, religious, and legal institutions because those same institutions underpin collective action that promotes success in warfare. The emergence and spread of state-level authority, particularly in Eurasia, can be tied to geographic regions that experienced more frequent warfare. In addition, particular forms of agricultural production interacted with warfare in the spread of states. Because they were more easily taxed, plant domesticates like rice and wheat facilitated better financing of state governments and their militaries.

Implications for Modern Society and Other Considerations

Is it possible to reduce inequality? How? Any answer to these questions is complex. Contemporary inequality arises within heterogeneous ecological contexts with varied and complex histories that reflect not only individual motivations to acquire status and resources but also group-level norms and institutions. Variable institutions (e.g., taxation regimes, social welfare policies) within similar ecological contexts give rise to significant variation in wealth disparities across modern nation-states, suggesting that understanding what drives institutional change will be critical to understanding the factors that shape inequality generally and within a given context.

Although institutions may initially evolve as a way of minimizing transaction costs, as individual circumstances become increasingly differentiated, the costs and benefits of institutions also become unequal. Some scholars suggest that sustained declines in inequality only follow major events like mass mobilization warfare, epidemics with high mortality rates, government collapse, or violent revolutions. However, the effects of these events are conditional on how much initial leverage citizens have over elites. Achieving lasting declines in inequality through less catastrophic means can be difficult, since elites often benefit more from, and have more

say in regulating, institutions. To constrain the power of elites, nonviolent protest movements fare better not only by involving a large fraction of the populace but also through frequent events to increase their disruptive effects.

An evolutionary view suggests that reducing inequality must consider biological and cultural adaptations, including those that affect how people codify inheritance (e.g., through kinship), how people respond to ED, and how people deal with CAPs and intergroup relationships. In general, inequality has arisen within the context of broader evolved tendencies to convert resources to status and reproduction and to do so in cooperation with preferred partners. In other words, contemporary inequality has been built by these tendencies and presumably can be unbuilt by understanding how they were produced by evolutionary processes at multiple interacting levels

See also [Dominance and Prestige](#); Evolution of Leadership; [Income Inequality](#); [Patriarchy and Its Origins](#); [Service-for-Prestige Theory of Leadership](#)

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