

The Impact of Wealth on Prestige and Dominance Rank Relationships

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As Kraus, Tan, and Tannenbaum compellingly argued in their thoughtful target article, there is little doubt that social class has a pervasive influence on human cognition. Here, we build on their article by examining how and why wealth and signals of wealth influence rank dynamics. In our view, a comprehensive account of the impact of social class on psychological functioning must address not only the direct intrapsychic effects of possessing or lacking wealth but also the ways in which wealth and signals of wealth qualitatively alter rank-based social relationships between the haves and have-nots. In other words, how does wealth affect the distribution of social rank and the nature of rank-based social relationships?

Within the social sciences, several theoretical models of rank attainment currently prevail, though some have received greater empirical support than others (see Cheng, Tracy, Foulsham, Kingstone, & Henrich, 2013, for a review). In prior work, we have found considerable empirical support for the Dominance-Prestige Account (J. Henrich & Gil-White, 2001), a framework that takes an explicitly evolutionary approach to human social rank dynamics. In our view, this account offers the greatest explanatory power and the most complete integration of the extant empirical knowledge. The major novel contribution of this model is its distinction between freely conferred rank based on respect for a leader's skills and knowledge (i.e., prestige) and coercively forced rank based on a leader's ability to invoke fear and intimidate followers (i.e., dominance).

Social class inequalities can give rise to differences in both of these two forms of rank, because symbols of class and wealth signal success and skill (and, by implication, promote prestige), yet also result in an ability to wield power and control resources, which can elicit fear and feelings of powerlessness among subordinates (and, by implication, promote dominance). By conceptualizing wealth as a signal and an individual-difference variable that can produce both prestige- and dominance-based hierarchical relationships, we acquire a more nuanced and theoretically rich understanding of the effects of social class on interpersonal relationships and social psychology. Next we discuss this account in detail, first by presenting a brief overview of the Dominance-Prestige Account of rank attainment, then by examining how wealth signals prestige, and finally by examining the ways in which wealth also influences dominance. Throughout this dis-

ussion, we focus on *wealth*, rather than social class more broadly, because we view wealth and resource control as one of the critical conceptual components of class that gives rise to class differences. Although class can also be based on other inequalities, such as educational status and hereditary birthright, these demographics and their associated symbols (e.g., diploma, family name) tend to be less widely advertised, visually salient, or reliably signaled in social interactions, compared with cues of wealth (e.g., jewelry, flashy clothing). For this reason, wealth and cues of wealth provide a better point of entry for examining the effects of class on social interactions, but we hope that in future work the approach delineated below can be fruitfully applied to other aspects of social class.

The Dominance-Prestige Account of Social Rank

By considering the selection pressures that likely favored the emergence of hierarchical relationships, the Dominance-Prestige Account of social rank proposes that there are two distinct paths to rank attainment in human societies: *dominance* and *prestige* (J. Henrich & Gil-White, 2001). *Dominance* refers to the induction of fear, through intimidation and coercion, to attain rank. *Prestige*, in contrast, is rank granted to those who are recognized and respected for their skills, success, or knowledge. In addition to its firm grounding in evolutionary science, the Dominance-Prestige Account diverges from other prevailing models of social rank in its assertion that *both* strategies persist in modern humans, both result in patterns of behavior that effectively promote social influence, and both can be effective even within the same social groups.

Dominance is seen in social relationships based on coercion, such as that between a police officer and citizen, or bully and victim. Dominant individuals create fear in subordinates by unpredictably and erratically taking or threatening to withhold resources (implicitly or explicitly); in response, subordinates submit by complying with dominants' demands, in order to safeguard other more valuable resources (e.g., their physical welfare, children, or livelihoods). As a result, dominants can attain a great deal of social influence. For example, those with formal institutional power, such as bosses, often evoke fear by threatening to provide or withhold resources.

Prestige, in contrast, is granted to individuals who are considered worthy of emulation, usually for their skills or knowledge. The opinions, wishes, and decisions of prestigious individuals tend to be heeded by subordinates who seek access to the prestigious, so as to benefit by copying or learning from these more skilled others; the result is that prestigious individuals are conferred with high rank. The influence of prestigious individuals is unique in that subordinates shift their views and opinions closer to that of the prestigious (an example of emulation) and heed their wishes out of deference even when they do not agree with them (an example of seeking favor, in order to be granted greater access to facilitate their own learning).

Dominance is theorized to have initially arisen in evolutionary history as a result of agonistic contests for material resources and mates which are common among both nonhuman species and our prehuman ancestors. Dominance continues to exist in contemporary human societies largely in the form of psychological intimidation, coercion, and wielded control over costs and benefits. In both humans and nonhumans, dominance hierarchies are thought to function to maintain patterns of submission directed from subordinates to dominants, and consequently minimize costly agonistic battles. For this reason, dominance relationships are assumed to be beneficial (i.e., fitness enhancing) for both dominants and their subordinates.

In contrast, prestige is likely unique to humans, because it is thought to have emerged from selection pressures to preferentially attend to and acquire cultural knowledge from highly skilled or successful others, a capacity that is less developed in other animals (Boyd & Richerson, 1985; Laland & Galef, 2009). From this perspective, social learning (i.e., copying others) evolved in humans as a low-cost, fitness-maximizing, information-gathering mechanism (Boyd & Richerson, 1985). Once it became adaptive to copy skilled others, a preference for social models with better-than-average information would have emerged. This would promote competition for access to the highest quality models, and deference toward these models in exchange for copying/learning opportunities. Consequently, selection likely favored prestige differentiation, a process whereby individuals who possess high-quality information or skills are elevated to the top of the hierarchy. In contrast, others can reach the highest ranks of their group's hierarchy by wielding threat of force (dominance), regardless of the quality of their knowledge or skills. For this reason, dominance and prestige are coexisting avenues to attaining rank and influence within social groups, despite being underpinned by distinct motivations and behavioral patterns, and resulting in distinct patterns of imitation and deference from subordinates.

It is important to note that both dominance and prestige are best conceptualized as cognitive and behavioral

strategies (i.e., suites of emotions, cognitions, motivations, and behavioral patterns that together produce certain outcomes) deployed in certain situations and can be used (with more or less success) by any individual within a group. Thus, all situated dyadic relationships contain differential degrees of both dominance and prestige, such that each person is simultaneously dominant and prestigious to some extent, to some other individual. Thus, it is possible that a high degree of dominance *and* a high degree of prestige may be found within the *same* individual and may depend on who is doing the judging. For example, Warren Buffett, the world-renowned business magnate, chairman and CEO of Berkshire Hathaway, and one of the wealthiest people in the world, enjoys extraordinary influence over thousands of employees and throughout the financial sector. He is widely regarded as one of the most successful investors in history and, as a result, possesses tremendous prestige in the eyes of many (including his own employees). However, having achieved a position of legitimate authority as chairman and CEO, he controls access to rewards and punishments for his employees (like other bosses) and thereby wields dominance. Buffett's influence is thus a function of both freely conferred prestige and threat-based dominance, though he can behave in ways that increase or decrease the extent to which his subordinates perceive him to be wielding each strategy. Indeed, empirical studies that have directly assessed dominance and prestige have shown that the tendency to engage in each of the two strategies, as assessed via both self- and peer ratings, is statistically independent of the tendency to engage in the other strategy ($M r = -.01$; Cheng, Tracy, & Henrich, 2010; Cheng, Tracy, Foulsham, et al., 2013).

Recent research has generated considerable support for the Dominance-Prestige Account of rank attainment. We have found, for example, that individuals who exercise either a dominance or a prestige strategy tend to emerge as the most highly ranked members of their group, and this holds for both groups of previously unacquainted individuals working together on a task in a controlled laboratory setting, and teams of individuals in real-world, naturalistic long-term hierarchical relationships (i.e., varsity athletic teams; Cheng et al., 2010; Cheng, Tracy, Foulsham, et al., 2013). More specifically, in a study examining hierarchy formation among previously unacquainted individuals (Cheng et al., 2013), each group member's use of a dominance and prestige strategy was assessed on the basis of ratings made by fellow group members and outside observers. Both dominance and prestige were found to significantly, and independently, predict emergent social rank within the group, as assessed through four indices: (a) other group members' ratings of each person's influence over the group; (b) outside observers' ratings of each person's influence; (c) behavioral demonstrations of decision-making impact,

quantified as influence over the group's final decision in an assigned group task; and (d) amount of visual attention each person received from outside observers, whose eye gaze was monitored using an eye-tracking device. Furthermore, in a study of hierarchical relationships among athletes on varsity teams (Cheng et al., 2010), individuals who were viewed by teammates as possessing dominance and those who were viewed as possessing prestige were both perceived as more effective and capable leaders. Together, these findings indicate that the two strategies are both associated with the attainment of higher rank, across controlled and more naturalistic contexts.

Findings from several other studies provide support for the theoretical distinction between these two rank-attainment processes. People who tend to wield dominance demonstrate divergent personality profiles; emotions; behavioral/ethological patterns; neuroendocrine patterns; and mating, reproductive, and health outcomes compared to those who wield prestige. For example, in our study assessing dominance and prestige via ratings made by fellow teammates (who knew each target well; Cheng et al., 2010), we found that highly dominant individuals tended to be narcissistic, aggressive, and disagreeable and showed a propensity toward experiencing the self-aggrandizing, arrogance-based hubristic form of pride. In contrast, highly prestigious individuals tended to have high self-esteem; be conscientious; give advice to others; and be prone toward experiencing the achievement-oriented, confidence-based authentic form of pride (Tracy & Robins, 2007).

In other research, fine-grained coding of the verbal and nonverbal behaviors spontaneously displayed by individuals during a social interaction revealed that those who are high in dominance tend to display intimidating and self-entitling verbalizations, such as forcefully pushing for their own opinion and gesturing toward their own importance, and engaging in spatially expansive and somewhat aggressive postural displays (e.g., wide/expansive posture, arms out from body; Cheng, Tracy, & Henrich, 2013). In contrast, those who are high in prestige tend to display socially attractive verbalizations, such as self-deprecation and seeking others' approval, and engage in confidence-signaling nonverbal movements (e.g., displaying the pride expression; Cheng, Tracy, & Henrich, 2013). Dominant individuals were also found to signal their formidability by lowering their vocal pitch during the initial minutes of a group interaction, whereas those high in prestige do not systematically change their pitch (Cheng, Tracy, Ho, & Henrich, 2013). Individuals high in dominance versus prestige also demonstrate divergent hormonal (i.e., Testosterone) profiles (Johnson, Burk, & Kirkpatrick, 2007); patterns of economic decision making (Bruno, 2006; Halevy, Chou, Cohen, & Livingston, 2012); differential perceived attractiveness and desirability (Snyder, Kirkpatrick, & Barrett, 2008);

and, in small-scale societies, reproductive success and nutritional health status (Reyes-Garcia et al., 2009; von Rueden, Gurven, & Kaplan, 2011). Collectively, these studies provide converging support for the claim that dominance and prestige are distinct and independent processes that simultaneously give rise to and underpin human rank relationships.

Wealth Influences Both Prestige and Dominance

The Dominance-Prestige Account can be fruitfully applied to sharpen our understanding of how wealth and symbols of wealth shape rank and rank-related processes. Specifically, wealth and symbols of wealth result in inequalities between people which can be characterized as both dominance- and prestige-based relationships.

Wealth Begets Prestige

Based on the theoretical framework that explains the evolution of prestige hierarchies, wealth should function as a marker, or signal, of prestige. An evolutionary approach to cultural learning suggests that, as humans evolved the ability to learn from other group members (i.e., engage in social learning), it became adaptive for them to adopt cultural learning practices that allow individuals to most effectively acquire high-quality, fitness-enhancing ideas, beliefs, values, and practices from others (J. Henrich & McElreath, 2003; Richerson & Boyd, 2005). One such practice, or cultural learning mechanism, is the *prestige bias* (J. Henrich & Gil-White, 2001), which involves the tendency to learn from and imitate the most highly skilled and competent (i.e., prestigious) individuals in one's social group. However, the task of identifying the most prestigious (and thus copy-worthy) individuals can be difficult, particularly in cases where true competence is not easily observed, or is costly (e.g., careful observation over multiple occasions is needed). Learners thus come to rely on observable cues and symbols of success and competence (which serve as proxies of skill) to supplement direct observation.

Indeed, a growing body of evidence indicates that the social learning preferences of both children and adults are guided not only by their observations of the abilities and competence of potential models but also by cues or symbols of prestige (for a review, see N. S. Henrich & Henrich, 2007, Chapter 2). For example, children as young as 2 years prefer to learn from models displaying confidence over those who appear uncertain (Birch, Akmal, & Frampton, 2010; Jaswal & Malone, 2007; Rakoczy, Warneken, & Tomasello, 2009; Sabbagh & Baldwin, 2001), and 3- and 4-year-olds choose to learn from models who have previously received preferential attention and deference from others (Chudek, Heller, Birch, & Henrich, 2012). In this

last study, deference served as a reliable and honest signal of relative prestige, because it is difficult for a model to fake others' deference (i.e. eye gaze) toward him or her. Other studies suggest that adults also seek prestige cues when placed in a situation where learning is beneficial; individuals who are incentivized to correctly answer trivia questions tend to copy the answers expressed by models displaying pride expressions but not expressions of other emotions, including happiness (Martens & Tracy, in press). The pride expression has been found to function, across cultures, as an automatic nonverbal signal of social rank and success (Shariff & Tracy, 2009; Tracy & Matsumoto, 2008; Tracy, Shariff, Zhao, & Henrich, 2013), so this finding suggests that adults are highly attuned to rank signals in their search for prestigious models. Furthermore, even *overconfident* individuals—whose self-appraised ability exceeds their actual performance—tend to attain greater influence over fellow group members by displaying behavioral signs of confidence (e.g., calm and relaxed demeanor, confident and factual vocal tone; Anderson, Brion, Moore, & Kennedy, 2012). These expressions, even when not corroborated by observations of actual abilities, present a salient prestige cue that attracts deference and imitation.

Wealth, as a symbol of accumulated success, should also function as a prestige cue. The amount of wealth a model has accrued—observable through dress and other adornment, house, car, and other possessions—provides learners with a measure of the model's degree of skill or success. Indeed, the most accurate indicators of a model's prestige are those that account for and summarize all of the available information indicative of the model's quality relative to others. Compared to other proxies of skill, information about a model's wealth is unique in this way: It is relatively easy and inexpensive to obtain, as it generally entails one-off observations of a model's appearance and/or possessions, for which the criteria for success are rather obvious (e.g., more lavish clothing and bigger houses signify greater wealth). In addition, the amount of wealth possessed by a model is generally a reliable and honest signal of relative model worth, because wealth, unlike certain other cues such as confidence displays, can neither be easily faked by displayers nor deceived or confused by potential imitators (i.e., others cannot effectively conceal or lie about the wealth of a desired model in the face of the model's concrete signs of wealth).

Learners who take advantage of information regarding a model's wealth, in addition to all other available information, can reduce the costs (i.e., time and energy) and errors typically associated with gathering and processing information to find the most competent model. Under circumstances in which it is difficult to directly observe skill, then, people should be especially likely to rely heavily on wealth as a proxy to competence.

Correspondingly, from the cultural model's perspective, it pays to maintain and/or further broadcast one's prestigious reputation by displaying wealth. Consistent with the principles of costly signaling theory (Zahavi, 1975; Zahavi & Zahavi, 1997), models who are able to widely broadcast their wealth (and by implication, skill), while incurring a cost to themselves (e.g., by purchasing expensive and conspicuous goods), will acquire more information-seeking social learners and benefit directly from the increased amount of fitness-enhancing deference they receive from an ever-wider network of followers.

Our suggestion that wealth signals prestige is supported by findings from several lines of research from across the social sciences, including ethnography, economics, and psychology. First, the ethnographic record supplies many examples of how prized possessions serve a prestige-signaling function, across numerous cultural contexts. For example, in manner parallel to the way that large houses and fancy cars signal wealth and prestige in industrialized societies, certain hunter-gatherer groups infer prestige from the possession of yams and pigs, which are displayed and spoken of by their owners with pride (Kaberry, 1941; Roscoe, 1989; Tuzin, 1972). Similarly, decorative ornamentation produced from difficult-to-obtain materials (e.g., arm shells and necklaces called "wampum") is also viewed, in some small-scale societies, as indicative of prestige (Malinowski, 1922).

Second, theoretical and empirical work in economics on conspicuous consumption suggests that consumers often purchase obviously expensive items in order to display their wealth and gain prestige (e.g., Veblen, 1899). Bagwell and Bernheim (1996) used mathematical models to demonstrate the functionality of conspicuous consumption as a signal of wealth. Furthermore, in more recent empirical work in rural villages of India, marriage expenditures were found to be guided by an underlying motive to gain prestige and respect (Bloch, Rao, & Desai, 2004). Weddings, which are typically paid for by the bride's family, are a major financial burden—costing, on average, one third of the family's annual income—and must be added to the large dowry for which the bride's family is also responsible. Bloch and colleagues (2004) found that brides' families tend to hold more lavish celebrations when their daughters marry a high-quality groom from another village (such that his quality/prestige was previously unknown to those in the bride's village) than when the high-quality groom is from the same village (and his prestige had already been established, thus reducing the need for the bride's family to broadcast their increase in prestige resulting from the marriage). This suggests that these ceremonial expenditures are a form of conspicuous consumption driven by the desire of the bride's family to signal to the community their increased prestige through association with the new

high-quality son-in-law (see also Rao, 2001; Roulet, 1996).

Third, findings from experimental social psychological research suggest that wealth and wealth symbols are associated with perceived prestige. For example, wealthy people tend to be stereotyped as highly competent (Fiske, Cuddy, Glick, & Xu, 2002), and men who wear expensive clothing (i.e., professional business suits) tend to receive greater visual attention, an indicator of conferred prestige (Cheng, Tracy, Foulsham, et al., 2013; Maner, DeWall, & Gailliot, 2008). Furthermore, the activation of prestige motives has been shown to increase the desire to purchase more expensive, pro-environmental “green” products, which serve the public good while concurrently displaying wealth, for individuals shopping in public but not in private (Griskevicius, Tybur, & Van den Bergh, 2010).

Of interest, not all conspicuous consumptions indicate the same degree of prestige. Compared to purely self-benefiting expenditures, supplying public goods that benefit the collective welfare at a personal cost is a particularly effective means of broadcasting prestige (see J. Henrich & Gil-White, 2001, for an extended discussion). This suggests that individuals should be inclined to signal their wealth through prosocial giving and other forms of altruistic consumption (e.g., charity), which tend to effectively capture the attention of the community. Consistent with this expectation, exorbitant donations to charities from the wealthy are widely interpreted by economists as driven by a desire to demonstrate one’s wealth and signal prestige (Glazer & Konrad, 1996). Another illustrative example is the extraordinary prestige and social attention garnered by participants of the famous Giving Pledge, in which more than 100 billionaires, including Warren Buffett and Bill Gates, publicly committed to donating at least half of their fortunes to philanthropic causes.

Wealth Begets Dominance

Although our account thus far has emphasized the effects of wealth in shaping prestige-based rank relationships, wealth also gives rise to dominance-based inequalities. Wealth affords the opportunity to employ others for their services and/or buy their goods, creating formal power differentials (e.g., boss–employee, buyer–seller) and asymmetric control over rewards and punishment, which can be used to elicit fear and evoke subordination (see Cheng, Tracy, Foulsham, et al., 2013). In addition, in the same way that wealth serves as a conspicuous cue to prestige, wealth signals an ability to threaten others and control resources in a manipulative fashion—that is, the power to evoke dominance. As a result, those who are relatively more wealthy may attain rank through both prestige and dominance processes.

This concurrent presence of dominance and prestige-based relationship is particularly likely in modern societies, compared to nonindustrialized small-scale societies comprised of foragers and horticulturalists. Complex institutional bureaucracies and relatively long-term, wage-based labor, which characterize the work experience of most people in the modern world, introduce dominance processes into everyday working life. For example, although higher paid bosses and supervisors might have ascended the institutional ladder and gained formal power through genuine skill and achievement, and thus be perceived as prestigious, institutional power allows them to force the compliance of subordinates, who may fear the consequences associated with disobedience. As a result, these formerly prestige-based relationships may become more grounded in dominance. Further intermingling these processes, many wealthy individuals are born into wealth and higher social class, such that the source of their wealth is unrelated to their own competencies, making their wealth evocative of dominance but not necessarily prestige. In many cases, however, these wealthy individuals acquire the symbols of prestige (e.g., as discussed by Kraus and colleagues, expensive taste in art, music, and culture, manners, and an Ivy League education), which can promote prestige (i.e., even if they attained power by virtue of birth, they retain it by becoming valuable cultural models—and wealth affords the opportunity to be seen in this manner). Nonetheless, dominance and prestige are distinct paths to rank (Cheng et al., 2010; Cheng, Tracy, Foulsham, et al., 2013; J. Henrich & Gil-White, 2001). It is therefore likely that wealth, and the appearance of wealth, can activate both prestige- and dominance-based relationships between individuals who differ in wealth and class.

Although our theoretical account suggests that wealth begets dominance, and vice versa, surprisingly little work has directly addressed the empirical links between wealth and the attainment of forceful control over others. Findings from several studies, however, are consistent with this suggestion. For example, Kraus and Keltner (2009) found that upper-class individuals tend to display self-focused and disengaged behaviors while interacting with strangers. Compared to lower class individuals, members of the upper class displayed more acts of self-grooming and doodling, signaling a lack of interest, and fewer engagement-signaling behaviors such as head nods. This behavioral pattern resembles the self-entitling verbal behaviors we found dominant individuals to display while interacting with others, such as gesturing to their own importance and appearing domineering and overbearing (Cheng, Tracy, & Henrich, 2013). Fiske and colleagues (2002) found that, in the United States, wealthy individuals are stereotyped as not only highly competent but also hostile and low in warmth—suggesting perceptions of

dominance. In addition, this work showed that wealthy individuals elicited in others not only feelings of envy, jealousy, and competition but also strong feelings of admiration, a pattern indicative of both dominance and prestige.

Concluding Thoughts

Kraus and colleagues' target article makes an important contribution to the literature, as it is among the first attempts to provide an integrative theoretical inquiry into the psychology of wealth and social class. The next critical challenge is to examine the processes underlying the relations observed, as well as the nuanced ways in which wealth alters social relationships, particularly in terms of rank-based relations. In this commentary, we focused on how wealth signals and evokes dominance and prestige, two fundamental but distinct strategies for attaining social rank. We reasoned that, by cueing accumulated success in some valued domain, wealth promotes perceptions of prestige, but by increasing one's opportunities to exert power and control over others, wealth also creates deferential relationships based on force and compliance, and thus can trigger dominance.

From our perspective, a comprehensive framework for understanding wealth and social class and its impact on human psychology needs to account for the ways in which wealth fundamentally alters our social relationships. Our account of how wealth influences the attainment of dominance and prestige directly targets this issue, by incorporating hierarchical class differences within the Dominance-Prestige Account. This approach complements and extends current models of wealth and can account for many previously less well-explained aspects of wealth-related social psychology. For example, this model can address such questions as why people display their wealth conspicuously by buying expensive cars and houses, why the wealthy advertise their fortune through public philanthropy, and why people regard the rich with both admiration and envy. This account also generates many testable novel hypotheses regarding the effects of wealth and social class on observers. For example, the theorized link between wealth and prestige leads to the prediction that individuals who display symbols of wealth should be more persuasive, more frequently imitated (as cultural models), and viewed as possessing greater competence; and these effects should be mediated by perceptions of prestige. In contrast, consistent with the notion that wealth activates a dominance psychology, those who appear wealthy are also predicted to evoke in others some degree of fear and intimidation and to induce compliance in others even in the absence of genuine persuasion; these effects, in turn, should be mediated by perceptions of dominance.

Although evidence in support of this account is only emerging, the accumulated research thus far is consistent with the suggestion that wealth shapes both dominance and prestige-based relationships. It is our hope that this account will stimulate further thinking and empirical investigation into the role of these two fundamental rank processes in the everyday psychological experience of individuals from high and low social classes.

Note

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