

Emergence of Stratification in Small Groups

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Abstract

Stratification within small groups is virtually inevitable. Understanding the precise mechanisms by which it occurs and the nature of its consequences is an important sociological endeavor. Individuals' pre-existing qualities, as well as advantages emerging from intra-group interactions, affect the flows of respect and deference accruing to each member of a group. Differences in these flows in turn create a hierarchy. In this article, we first discuss foundational research on the causes and consequences of stratification before turning to more current trends. We focus on the ways in which status, the primary determinant of one's location in a group's hierarchy, is created and maintained or lost. We discuss the Matthew Effect—a process by which high-status group members receive disproportionate credit for their contributions, and also more easily maintain their status. We also address the circumstances and activities that can curb the Matthew Effect. We then move to current research, which centers on two main concepts: first, we consider peer effects, discussing the various means by which an individual's closest peers shape his or her status; second, we take a broader perspective by examining small groups as open systems. This section considers how a group's external environment, including other nearby groups, affects the level and stability of within-group stratification. We emphasize key issues and implications for future research on these topics.

Keywords: status, inequality, small groups, networks, peer effects, organizations

Relevant disciplines: Sociology, Psychology, Anthropology, Management/Organizations

Introduction

Much like aging for the individual, stratification within groups is everywhere and inexorable (Michels, [1915] 1962; Bales, 1950; Sherif, White & Harvey, 1955), though at times it is reversible. Even in groups where the understood goal is to preserve equality, parity, or homogeneity, hierarchies recurrently emerge and persist (Leifer, 1995; Bothner, Kang & Stuart, 2007). Whether group members become differentiated due to variations in pre-existing qualities or by virtue of uneven access to positional advantages emerging from interaction, a typical pattern is for members of groups to receive different levels of deference and respect, and thus to “fan out” in status (cf. Dannefer, 1987).

Understanding the precise mechanisms that give rise to this stratification is an exciting and important intellectual mission. Some mechanisms create status hierarchies that are highly unequal and stable, yielding, for example, a small handful of superstars to whom middle-status counterparts obediently conform (Phillips & Zuckerman, 2001). Consider, for instance, an executive team led by “old sages,” in which the CEO and his trusted heir easily control their lieutenants. Yet other mechanisms foster status orderings that are more tightly packed and fluid, producing a very different “felt reality” in which positions are shifting and slippery. Consider now an organization filled with “young Vikings” whose CEO must stave off weekly mutinies. Occasionally, such mutinies succeed, throwing the incumbent status hierarchy into upheaval.

These examples help bring into relief our primary motivations for pursuing a better understanding of stratification in small groups. First, we wish to consider the topic generally, as stratification generates a host of positive and negative outcomes: these include incentives, opportunities, and constraints faced by individuals as inequality mounts, as well as the overall

welfare of whole groups as stratification gets sharper (Frank & Cook, 1995; Bothner, Podolny, & Smith, 2011). Our second motivation is to understand the specific mechanisms by which stratification emerges. Focusing on mechanisms is important not only because distinct patterns of interaction result in different levels of stratification; it is also the case that diverse paths to stratification may yield identical “final” status orderings, but very different levels of stability. Stratification varies across small groups by intensity, but also by permanence, so that some groups face “durable inequality” (Tilly, 1999), while others possess hierarchies that are compressed and volatile. Gaining greater clarity around the specific mechanisms at play permits us to learn more about what shapes the level of status inequality, the degree of status stability, and their consequences.

Towards these ends, our aim in this article is to sketch new directions for better understanding why, how, and to what extent stratification emerges in small groups. Our point of departure is foundational work on the subject—an important stream focused on how stable characteristics (such as race, gender, and skill) induce stratification among locally interacting individuals (e.g., Berger, Cohen, & Zeldich, 1972). While we lead with a brief review of this literature in our next section, we also pursue a wider perspective on two levels. First, although we subsequently discuss a classical example of the small group—the Nortons street gang of Boston’s North End (Whyte, [1943] 1993)—we believe that small group research will benefit from a wider definition of the group. In particular, we envision relevant small groups not only as executive teams (Morrill, 1995), laboratory task groups (Bales, 1950), and bomber crews (Torrance, 1954). We also believe that important small groups include cliques of spatially dispersed scientists, who compete intensely for peer recognition (Burt, 1978), and even strategically similar firms that closely monitor each other (White, 2002). Second, in addition to

highlighting how individuals' stable traits structure dispersion in status, we draw attention to four additional bases for stratification. We contend that small groups are ultimately best seen as "open systems" (Scott, 2002), and so after discussing internal processes, we close with suggestions for future work that involves construing a focal small group as embedded in a larger "group of groups."

Foundational Research

Status Characteristics

Starting with Simmel and his discussion of triads, small groups—and especially differentiation within small groups—have been of interest to social scientists. Some of the earliest work on small group stratification aimed merely to understand which individuals in a group held the highest position, and what that meant for interaction and activity within the group (Bales 1950; Horvath 1965). Horvath (1965) proposed a model, for example, in which those with the highest status speak first, and interactions continue down the hierarchy, with each subsequent participant contributing less than the previous. Similarly, in groups where status was experimentally produced (i.e., participants were given expectations about other group members' status levels) judgments of contributions coincided with those status levels (Sherif et al. 1955). That is, group members were judged as having performed in accordance with their pre-established status levels.

The logical next step to this research examined the effect of "status characteristics"—race, gender, educational attainment—on participants' pre-interaction expectations. Each "level" within a status characteristic (e.g., "male" or "female") is associated with preconceived notions about performance in different arenas, leading the members of newly

established groups to form socially-informed expectations about the future performance of their colleagues based solely on those characteristics. This work has generally found that those expectations are often manifested in the contributions of group members and in the consequential status hierarchy of the group during a task. These phenomena, which are similar to the notion of the self-fulfilling prophecy (Merton, 1957), are the central elements of “expectation states theory,” a highly influential and foundational piece of small group stratification research (see Berger, Rosenholtz & Zelditch [1980] and Ridgeway & Walker [1995] for more in-depth reviews of this early work on status characteristics and small group stratification).

Before proceeding, an important distinction is essential for understanding the two main streams that have characterized research on stratification in small groups. This distinction is between the previously described status characteristics (i.e., predominantly stable, though generally socially constructed, traits ascribed to an individual) and status more generally, which refers to the amount of prestige and deference one is granted within a particular group or social context (Bonacich, 1987; Podolny, 1993). Status characteristics are external to a given group, while status itself is relational and often coterminous with the group in which it was established. While status characteristics usually contribute to the formation of a status hierarchy within a group—as seen in the expectation states work—the opposite is not always possible. That is, although an individual may gain status in a particular group, that endowment of status does not automatically become a status characteristic attached to that individual when she leaves the group in which her status was gained: unlike a status-conferring trait, status itself—defined relationally—is inherently situational, rather than portable.

The effect of status on small group stratification most interesting in situations where pre-existing status levels are unknown or equal, meaning group members are not easily

differentiated via status characteristics.¹ Accordingly, dynamics and group outcomes are contingent upon the status hierarchies that develop *ex post* as opposed to *ex ante*.²

Current Research and Key Issues for Future Research

Emergent Processes

The Matthew Effect

Beyond their direct implications on stratification, status characteristics can catalyze hierarchy formation even further when mixed with an emergent process known as the “Matthew Effect” (Bothner et al., 2010; Bothner, Podolny & Smith, 2011). When Merton (1968, pp. 57-58, 62) first used this metaphor to discuss stratification among scientists, he applied it on two planes: micro and macro.³ On a micro or social-psychological plane, Merton used the metaphor to summarize a process by which high-status scientists garner significantly more credit for equal intellectual contributions than their less-well-regarded counterparts: Newton and Leibniz discovered calculus independently in the late sixteen hundreds, and although Leibniz’s calculus is closer to modern practice, Newton’s status in the Royal Society channeled credit disproportionately in his direction. On a macro or structural plane, Merton also used the

¹ Work on status characteristics has discussed such situations, as well. According to Berger et al. (1980):

The theory of status characteristics and expectation stats can be used to suggest ways of reducing the effects of irrelevant status characteristics....The three principles of the theory that have been most often exploited for this purpose are (a) the inconsistency-equality effect; (b) the effect of associations between characteristics possessed by referents on expectancies for interactants; and (c) the effect of status characteristics on significance of evaluations by various sources.

Most interventions have been based on the combining principle: According to this principle, inconsistency in status characteristics increases equality—given a fixed number of status characteristics equally relevant to the task outcome, the greater the inconsistency of these characteristics the less the differentiation among the actors in the group (see Humphreys and Berger 1979). (p. 500)

² We refer those readers interested in the status characteristics work to the two review articles mentioned above, as we will spend much of the remainder of this article further exploring the implications of the more general status on small group stratification.

³ Merton drew the term from a verse in Saint Matthew’s Gospel (25:29): “For unto every one that hath shall be given, and he shall have abundance: but from him that hath not shall be taken away even that which he hath.”

metaphor to depict a process, known as “cumulative advantage,” by which eminent scientists benefit from positive feedback between intangible and tangible resources. Though already of high status, these scientists end up even further ahead of the rest of the field—much further out in front than one would predict on the basis of skill alone: Einstein was certainly more gifted than his contemporaries, but his monopolization of the genius label is also driven at least in part by cumulative advantage. Such processes extend beyond the scientific community to virtually any small group, proximate or otherwise, leading to situations where the highest-status individuals in the group are able to extend their advantage over others and reinforce an emergent hierarchical structure.

However, the self-reinforcing dynamic of the Matthew Effect may be arrested by various factors, and so despite its tendency to fuel and concretize inequality, the Matthew Effect also invites instability. It may even trigger reversals in status. The countervailing factors fall into two broad categories: predetermined checks and emergent by-products. Some examples of predetermined checks (i.e., external, normative forces predating the focal small group’s founding) include strong beliefs in the morality of redistribution (Merton, 1988) and a celebration of bottom-to-top social mobility (Luhmann, 1987). The Matthew Effect is marked by a “double injustice” in which marginal people are “unjustifiably victimized” while their prestigious counterparts are “unjustifiably benefited” (Merton, 1968, p. 59). Consequently, it can attract and mobilize the intervention of those who wish to limit inequality or support underdogs’ ascent.

Three other checks on the Matthew Effect emerge reactively from within. These constraints typically arise after a wide chasm has formed between elites and marginal actors. One such constraint is “that high-status actors fear a loss of status due to any association with the

low-status actors” (Podolny, 2005, p. 37). Separate from elites’ need (by definition) to ensure the presence of lower-ranked others—status necessarily requires others down upon whom those with high status can look—fear of guilt by association places a limit on cumulative advantage.

Although an “empire-builder” may wish to take over the activities performed by other group members, he or she also keenly wishes to avoid the stain of performing tasks tied to low status, and so the existing division of labor often persists. A second, related check can surface from the bottom of the hierarchy. Imagine that a group leader desires to widen his or her influence by collaborating with those at the group’s periphery. These peripheral members may eye the leader’s gesture with suspicion, concerned that he or she lacks commitment and is reaching out merely for show (Zuckerman and Kim, 2003, p. 30). The attempted land grab and desired, consequential status boost are thwarted.

A third restraint follows from the principle that high status individuals must nonetheless endorse at least *some* members of the group. Expressing the “dilemma of leadership,” Blau (1964, p. 203) noted that while elites must keep some distance from their subordinates, full independence is untenable; “earning [their] social approval” is also imperative. Without sending at least some recognition down the hierarchy, influence (and thus status) would cease. Yet, endorsing an underling can at times prove risky, leading to positional churn and diminished stratification. This risk is a function of two key features of status itself: its zero-sum nature and its tendency to diffuse or be conducted through endorsements. When a leader endorses a lieutenant, the status of the leader can so significantly “rub off” that the latter ends up catching, and even surpassing, the former in relative standing.⁴ In this sense, elites may unwittingly

⁴ As an example, Bothner et al. (2010, p. 85) describe a struggle for power between Steve Jobs and John Sculley at Apple Computer: “Jobs, with charisma to spare but searching for a corporate mentor, had successfully persuaded Sculley to leave a promising track at Pepsi and join him at Apple to ‘change the world.’ Jobs’ extraordinary status rapidly magnified Sculley in the Apple fold. Yet, after endorsing Sculley, Jobs eventually found himself overtaken in stature by the former, as Sculley convinced Apple’s board of directors in a moment of crisis to strip Jobs of his power. Thus, Jobs was (at least for several years) surpassed in

sabotage their chances of benefiting from the Matthew Effect.

What counteracts *these* counteracting factors are the “endogenous investments” (Simcoe & Waguespack, 2010; Sauder, Lynn, & Podolny, 2012) of high-status actors. Individuals (and companies) at the top of status hierarchies are not only deeply interested in remaining at the top; given the cost advantages associated with status, they are also uniquely poised to shield their positions from others’ encroachments. High status organizations can more easily buy up talent (Podolny, 1993), and thus make hard investments in the quality on which their status (at least partially) rests. They can also send softer signals more readily than less prestigious rivals by consuming conspicuously (Veblen, [1899] 1994): just as a top art critic might host a Gatsby-like dinner party as a “feather display,” an elite winery can ostentatiously use a helicopter to dry its vineyards to reinforce its top standing (Mahenc & Meunier, 2006; Askin & Bothner, 2013).

Other forms of endogenous investment include calculated gift-giving—designed to elicit future streams of deference—as well as strategic role-reversals. High-status individuals often enjoy a remarkable level of security (Phillips and Zuckerman, 2001), and so can ephemerally allow, or even encourage, their subordinates to roast them. In these orchestrated role-reversals (cf. Wunderli, 1992), the “tough chin” and good humor of the status-holder further lock in the existing status order.

Thus far, our discussion of emergent drivers of stratification in small groups has revolved around a divide between high-status and lower-ranked group members: often as a function of a salient characteristic, those with a status advantage pull ahead, their lead is exaggerated by the Matthew Effect, and what ultimately follows is a question of which social force wins out: checks on cumulative advantage or elites’ endogenous investments. While the Matthew Effect has been examined thoroughly in the literature, it remains a topic of close scrutiny (DiPrete & Eirich

2006). One interesting path for taking this research further involves better understanding the relative strengths of checks on cumulative advantage versus elites' investments in status preservation: Under what conditions, and through which specific strategies, are elites most likely to hold their ground? Conversely, what sorts of interventions and emergent reactions are most pernicious for those at the top?

Peer Effects

We turn now to a different emergent process—the impact of proximate peers. Our interest—and we believe a fruitful area for future research on small group stratification—is in the competitive pressures peers apply, and the implications of those pressures.

Consider first two individuals, *J* and *K*, who regard each other as close peers because their standing in the small group is similar (Burt, 1987; White, 2002). Imagine further that *K* “pulls ahead” of *J* on some valued dimension that is a basis for status in the group. In this hypothetical, we envision five kinds of peer effects that we expect to influence the degree and stability of inequality (Askin & Bothner, 2012, pp. 1-7):

- (1) An ecological peer effect. When *K* advances past *J*, *J* fails to respond, causing the two to swap locations in the status hierarchy.
- (2) Status diffusion. *K* moves past *J*, but *K*'s “halo” (passively) gets transferred to *J*, so *K* and *J* jointly surpass *L* and *M*.
- (3) BIRGing. As *K* advances past *J*, *J*'s *affiliation with K* allows him to (actively) “bask in the reflected glory” of *K* (Cialdini et al., 1976), allowing both of them to again rise in status together.
- (4) A cosmetic contagion effect. As *K* ascends in status, *J* responds with predominantly political actions, characterized by lobbying and other “influence activities” (Milgrom & Roberts, 1988) designed to curry favor with other endorsers.
- (5) A material contagion effect. As *K* rises in status, *J* again responds, but in this situation, *J*'s response is mainly productive—marked by actions that raise *J*'s quality or the welfare of the group collectively.

In this set, (1) is a baseline case: J and K simply trade places. Cases (2) and (3) are similar, but differ in that (3) involves J 's active pursuit of K 's halo, while in (2) the halo passes “automatically” via reciprocated ties between J and K or via third-party gossip. Put differently, in (2), the knight rises quietly with the king's fame, while in (3) the knight maneuvers to gain credit for the king's ascent. Cases (4) and (5) involve more agency by J than in (3), yet differ from each other in the value of the reaction to status-anxiety. J 's rise is more attributable to active improvements in quality in (5), as opposed to mere “window dressing” in (4).

We suggest that the dominant ways in which peers respond to each other's status-movements will discernibly affect the structure and stability of status distributions in small groups. Consider Figure 1 below, which is a two-dimensional space with the degree of status dispersion (i.e., inequality) running from low to high along the horizontal axis, and the temporal stability of status positions extending from low to high on the vertical axis.

[Place Figure 1 here]

Unsurprisingly, we expect small groups dominated by ecological (case (1)) peer effects to occupy the southwest corner, marked by minimal inequality and considerable churn. Conversely, our main prediction is that small groups dominated by material contagion (case (5)) generally inhabit the northeast corner, marked by substantial inequality and little churn. In our view, the core issue is that the “pack-like” nature of status mobility is especially likely under case (5). We speculate that the nature of J 's response in case (5) will draw others in, putting pressure on a select few capable of keeping up. This able subset can join J and K , spiraling upward together and leaving others behind.

In contrast, our hypothesis is that small groups characterized by cases (2), (3), and (4) typically reside closer to the midpoint of this space. Going back to our sketch of checks on the Matthew Effect, status diffusion necessarily limits inequality: those with high status end up (perhaps unwittingly) sharing status with the people they endorse, necessarily descending (relatively) in status as a result. Cases (3) and (4) are intellectually interesting mechanisms because they point directly to the fact that status ascent is frequently self-presentational and *unearned*. At the same time, these are also fragile strategies for status ascent (Bothner, Smith, & White, 2010), and are likely to invite considerable backlash from those peers who were passed. Our falsifiable prediction is that, under such conditions, a tighter and more fluid hierarchy will emerge.

Beyond-Group Factors

Peer effects are wholly contained within the group in question—only physically or cognitively proximate peers bring such effects about—but there also exist forces *outside* of groups that shape stratification *within* groups. Consideration of these external forces by definition introduces a wider perspective on within-group dynamics, permitting an analysis of the focal group as itself a member of a larger “group of groups.” While this represents a higher level of abstraction, it also provides a measure of context often neglected in prior research (cf. Askin & Bothner, 2012, pp. 25-26).

We are persuaded that three beyond-group factors merit close attention in new research on small groups. The first of these factors is the global status of the group under scrutiny. Consider, as a brief thought experiment, how a large shift in global status might have affected the Nortons street gang of Whyte’s (1993, pp. 3-51) classic ethnography of Boston’s North End.

While the Nortons were marked by established internal pecking order, Whyte is also clear that the Nortons collectively resided near the bottom of the broader societal status hierarchy: groups of college-bound peers, politically-involved locals and even community club members all enjoyed higher group-status than the handful of young men known for hanging out on Norton Street.

Our primary question is the following: What would happen if the Nortons, under the direction of “Doc,” the gang’s leader, were to ascend as a group relative to *other* small groups in Boston’s North End? Would intra-group status dispersion (i.e., the Nortons’ internal hierarchy) dilate or contract? One can plausibly imagine that those gang members largely responsible for lifting the global status of the Nortons would, in accordance with the Matthew Effect, receive a disproportionate amount of credit, distancing themselves from others in the group. Conversely, members of a low-status group may have extra incentive to avoid being “the lowest of the low,” a pressure that may diminish with elevated group status. Weaker incentives to press upwards within a group could lead to a more condensed status hierarchy—*all* of the Nortons are happy just to be in a group of elevated status—or a more dispersed one where the lower status individuals in the group do not mind being significantly outpaced by others. Examining the impact of global status dynamics on within-group stratification is thus a complex task, and one that offers a potentially high-payoff avenue for future research.

A second promising area for future work concerns the *permeability* of the local status hierarchy boundary. That is, how likely are members of a group able to transition out of one group into an adjacent, higher-status group? A “thin wall” around a group could foster one of two within-group structures. On one hand, permeability may create an internal status distribution that is increasingly skewed: sensing the opportunity to “break out,” strivers redouble their efforts

to distinguish themselves from their peers. On the other hand, the local status hierarchy might be temporarily compressed as aspiring individuals see themselves in an “end game.” Focused on breaking into a more elite group, endogenous investments in their current status cease, and their local standing (at least ephemerally) falls. Such a strategy would then be seen—should these individuals ultimately make an upward leap in groups—as a “trampoline effect”: the contraction of the initial group’s hierarchy was a transitory descent prior to a global ascension by one or more social climbers.

Third, there exists the opportunity for an external third party to exert influence over a local status hierarchy. In prior research, third-parties are often portrayed as role-stabilizers, confirming and solidifying an already-congealing structure (see Sauder [2006] on third-party arbiters and Burt [2005] on echo effects). However, third parties also represent an opportunity to disrupt a local hierarchy when they appear during or after its formation. Returning to the Nortons, a relevant example is their introduction to the “Aphrodite girls.” This was a group of local girls that served as potential romantic targets for the Nortons and with whom the Nortons engaged socially. With the introduction to an external group, there is the opportunity for a shift in the way that the Norton members are “valued.” In particular, we envision a potential shift that is perhaps best seen in a distinction drawn by Podolny and Hill-Popper’s (2004). In their framework, a third party’s move from a “hedonic” to a “transcendent” conception of value involves construing an object (e.g., a painting, a college education, or even a person) very differently: instead rooting an object’s value in the satisfaction it offers *relative* to comparable items (hedonic), its value is now inherent and grows with the third party’s idiosyncratic and personal relationship with that object (transcendent).

When a shift like this occurs, status *itself* (which contributes to an individual’s hedonic

value) loses value: although it ultimately turned out to be otherwise, if each woman in the Aphrodite group had in fact found the traits, personality and quirks of each one of the Nortons attractive, the status of each Norton relative to one another would not have mattered.

Counter-factually, they would have been valued more transcendently. This could have rendered the Nortons' internal hierarchy moot under two necessary conditions: if the choices of certain Aphrodite women were deemed to be of greater value and those women selected Nortons that happened to be lower in the initial, pre-Aphrodite hierarchy. More generally, in such situations, it behooves those at the floor of the internal status hierarchy to shift the rules of interaction to the "transcendent plane" (White & White, 1993) in order to render stratification less relevant.

Together with questions about group-level status and the permeability of status boundaries, these potentially disruptive third party effects represent additional ex-group processes worthy of deeper exploration.

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Figure 1: Expected Links between Peer Mechanisms and Group-Level Stratification Outcomes

