

Abstract

Who are the neighbors of those who attain high status, and what is their fate in the wake of another actor's status elevation? In this essay, we consider the consequences of an individual's change in status for proximate individuals and domains. Particularly, we identify two, potentially simultaneous shifts in resources: a *concentration* of local recognition around high-status individuals and their immediate neighbors, and an overall *elevation* of recognition to the domain. We identify conditions in which within-domain or between-domain reallocation will occur, and we outline opportunities for future research.

The Matthew Effect and the Lucan Lawyer: The Ecological Consequences of Status Shocks

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25 And, behold, a certain lawyer stood up, and tempted him, saying, Master, what shall I do to inherit eternal life?

...

27 And he answering said, Thou shalt love the Lord thy God with all thy heart, and with all thy soul, and with all thy strength, and with all thy mind; and thy neighbour as thyself.

...

*29 But he, willing to justify himself, said unto Jesus, **And who is my neighbour?***

(Luke 10:25-29)

As we take stock of status research 50 years since Robert K. Merton's seminal paper on the Matthew Effect, it seems fitting to open with another Biblical allusion. While Merton paraphrased Matthew to illustrate a social phenomenon—actors elevated to high status generally receive more attention for the same quality of output (Bothner, Haynes, Lee, & Smith, 2010)—we invoke this episode of the 'Lucan Lawyer' to point out an important omission of researchers. For all of the focus on the 'Matthews' who attain high status, scholars have tended to ignore the system-level, ecological consequences of shocks to an individual's status. We ask,

'Who are the neighbors' of those who attain high status, and what is their fate in the wake of another actor's status elevation?

Merton discussed aspects of this question directly as he described those coming just short of attaining high status. He referenced the French Academy's cap of 40 elite members and contemplated the relative (to members) disadvantage of the '41st chairs', despite possessing near-equal quality (1968, pp. 56-57). He also commented on how junior coauthors of eminent scientists are ignored (see also Simcoe & Waguespack, 2011), and how in the event of simultaneous discovery, the scientist of higher eminence typically garners the lion's share of the credit. But we argue this focus on 41st chairs has insufficiently addressed the 'neighbor question', since 41st chairs comprise a very selective subset of the social system in which 'Matthews' are embedded. We contend that many more actors stand to be affected by an individual's ascent to high status.

We think the wide-ranging effects of status shocks follow from the exclusivity of high-status signals and the scarcity of their attendant rewards.¹ First, the prizes or accolades that cause status elevation are (intentionally) kept in short supply. In fact, the value of status signals precisely inheres in their scarcity. If such signals were possessed by most or all actors in a social system, they would cease to be a meaningful source of quality differentiation. Second, the audiences who attend to these status signals have limited cognition and limited resources to bestow: music lovers attend only so many concerts; food critics feature only so many restaurants; articles cite only so many papers. Thus, even though the number of individuals able to claim high status may grow with time, audience budgets will ensure rewards are restricted to a salient set. Together, these conditions suggest that an individual's rise in status and their accompanying surge in attention *must come at the expense of some other actors*.² In this essay, we seek to identify the source of the supra-normal level of attention 'Matthews' enjoy. To put

¹ Our recent research agenda has investigated status "shocks" from prestigious prizes that cause a rapid change in an actor's status. Prizes are a compelling context for study because their sudden occurrence facilitates econometric identification, but we believe the arguments here generalize to any change in status.

² These conditions also suggest that there is an unequal allocation of rewards even among stars, such that as incumbent 'Matthews' are joined by new stars, those with a more recent ascension enjoy more of the spotlight. Incumbent stars are certainly a possible source of the surge of attention enjoyed by Matthews. Future research could examine the 'depreciation' of status.

the matter bluntly, because of the finite quantity of deference available for allocation in a social system, we believe that the nature of status processes is such that some actors must lose recognition when others gain it. The general question of “who loses?” when others gain has received short shrift in the literature.

Actors generally compete for attention with alters who are engaged in similar activities. Reciprocally, resource-bestowing audiences are also largely localized: rather than attend to all possible candidates, audiences tend to reserve their attention for sets of products and producers that are proximate in some technological, artistic, cultural, or scientific space. There are few broad-based critics: financial analysts tend to specialize coverage within industry segments; fine and performing arts critics within genres; and scientists within narrow slivers of singular academic disciplines. As a general matter, audiences allocate their attention per the perceived quality of candidates in local domains.

Status shocks may shift audience attention in two ways. One possibility is that as the status shock elevates the focal actor’s perceived quality, the newly anointed star captures the attention that local audiences had allocated to their domain neighbors. But there is another possibility altogether: an individual’s rise in status may elevate general interest in their domain, drawing increased attention from outside audiences. In this scenario, the star has effectively expanded the audience for the local domain, potentially increasing the attention to neighbors. Again, given the finite nature of status and rewards, this ascendance must occur at the expense of some other, probably related domain(s). Thus, status shocks may instigate within-domain and between-domain attention reallocation.

The history of the wine industry provides an interesting example of between-domain reallocation of attention. On May 24, 1976, wines from Napa Valley and Santa Cruz vineyards took top honors in a blind taste test officiated by many of the foremost wine experts in France. Judges were astounded to learn that they had placed California wines in three of the top four standings in the white wine category, and one in first place for red wine. The California wine industry subsequently enjoyed an estimated seven-fold increase in producer value by 2001 (\$6.8 billion annually; Peterson, 2001). Later termed the ‘1976 Judgment of Paris’, this historic tasting is associated with a new era in wine, in which New World wines also could make claims

to superior quality. In this example, the bestowal of a status-enhancing accolade probably elevated California wines as an entire category, at the expense of the classic French viticultural regions.

As we described above, status shocks may induce two, potentially simultaneous shifts in resources: a *concentration* of local recognition around prizewinners, and an *elevation* of recognition to the domain as the potential audience for it expands. In both cases, the net influx of attention that accrues to the domain must originate from somewhere, which implies losses in recognition elsewhere in a social system. When status shocks enact a positive influx of attention to the domain but within-domain reallocation is low, the average change in attention to neighbors should also be positive. Conversely, when the total level of attention remains relatively fixed but becomes skewed in favor of stars, the average change for neighbors should be negative.³

The type and degree of reallocation likely depends on the locus of uncertainty: whether the quality of actors or the domain itself is in question. In the case of tight coupling between status and quality (Podolny, 1993), merit trumps status and there should be no re-ordering (e.g., prizes come as no surprise). In the case of actor-level uncertainty, much of the reallocation probably occurs intra-domain. In the case of uncertainty at the domain level, status shocks may preserve but elevate entire domain-specific status orderings, but at the expense of other domains.⁴ Relatedly, the nature of reallocation likely depends also on the specialization of actors and precision in attributions of merit (see Sauder's discussion of ambiguity elsewhere in this series). If a star's offering in a domain is highly differentiated from others, then the benefits of reallocation are largely confined to them. But, if their offering is similar to others, or was a work of collective production, then reallocation should benefit the broader set of domain neighbors.

Our recent work in the life sciences informs these propositions. We examine the impact academic prizes on citations to papers 'neighboring' the work of award winners, as determined

³ In another scenario, expectations are mixed: the 'pie' of attention expands, but this benefit may be offset by intra-domain reallocation.

⁴ This is likely the case in the aforementioned example of the Judgment of Paris, in which domain-level uncertainty was high. Because California wines were unknown at the time of the competition, they had much to gain from recognition.

by proximity in research topics (Reschke, Azoulay, & Stuart, Forthcoming). In general, we find that prizes do effect an influx of attention from outside of the research domain, but that award winners and their coauthors enjoy a disproportionate share of this increased pie. Also, we find evidence that those who do cite neighbors of prize winners tend to do so at a greater scientific distance than before, suggesting a general movement away from fields anointed by stars. In all, the attention reallocation accompanying the shock of an award has a net negative impact on the neighbors of award winners. In other words, we find that scientific neighbors lose attention they counterfactually would have garnered in the absence of an award that diverts it elsewhere. But we also find a few situations, such as when a research domain is emergent, in which the arrival of a prize to an individual scientist benefits the overall field of work.

In this essay, we have called for a broader, ecological lens in future examinations of ‘Matthews’ and their ascent to high status. We conclude by outlining a few additional opportunities for future research. First, as we zoom out from the individual level and consider domain-level dynamics, what can explain which neighboring domains are impacted by a status shock? Accounting for substantive relevance, are some domains more vulnerable to attention loss than others? Second, how permanent are these domain-level decrements? Are external audiences venturing temporarily into Matthew-marked territory, or does this herald the demise of their former domains? Third, just as Sharkey and Otner consider the ‘crispness’ of reward systems (see respective articles in this series), we ask, how does the exclusivity of reward systems impact the breadth of attention reallocation? Particularly, how are these forces affected by the frequency and focus of status shocks? For example, perhaps consistent with the rise of collaboration in science (Jones, Wuchty, & Uzzi, 2008), the Nobel Prize is increasingly shared among multiple individuals⁵. Does this division diffuse the ecological consequences of prizes, making attention reallocation more localized?

We hope that the next fifty years since Merton’s Matthew Effect (1968) are as fruitful as the first. We suggest that examining the domain dynamics of status shocks will be a productive path forward.

⁵ For instance, the 2016 prize in Physics was shared among three individuals: half to David J. Thouless, and the other half to the collaboration of F. Duncan M. Haldane and J. Michael Kosterlitz.

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