

Don't follow the leader: how ranking performance reduces meritocracy

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Executive Summary

This paper addresses the tension between performance ranking systems and genuine meritocratic outcomes in modern economies. The author argues that ranking-driven imitation of top performers is a self-defeating strategy that consolidates early advantages of lucky — rather than necessarily talented — individuals. Using an agent-based numerical simulation with N agents selecting among M actions, the study contrasts two action-selection mechanisms: imitation of better-ranked peers (parameterised by q) and random exploration (serendipity). Key findings demonstrate that higher imitation propensity (high q) increases aggregate utility but simultaneously raises inequality (measured via Gini coefficient), reduces correlation between agents' intrinsic fitness and ranking outcomes, homogenizes the action space, and freezes ranking mobility. Conversely, lower imitation propensity (low q) preserves upward ranking mobility, maintains diversity of strategies, and produces outcomes more aligned with agents' intrinsic capabilities. The model draws on Goodhart's Law, the Hawthorne effect, and empirical parallels in academia, financial markets, and sports. The author concludes that performance ranking systems, as currently implemented, structurally undermine the meritocratic goals they purport to serve.

Key Insights

1. Imitation of top performers increases aggregate utility but produces higher inequality and lower meritocracy — the bottom 10% of agents eventually accumulate less utility under high-imitation regimes than under random action selection.
2. Rankings tend to freeze under high imitation: early 'lucky winners' consolidate their positions regardless of intrinsic talent, creating a negative feedback loop where attempts to climb rankings through imitation further entrench existing hierarchies.
3. Serendipity (random action exploration) acts as a double-edged mechanism — it initially creates lucky winners disconnected from talent, but at low imitation levels it partially restores meritocracy by enabling upward mobility and preserving diversity of strategies.

Practical Takeaways

- Organizations relying on public relative performance feedback (PRF) and best-practice dissemination may observe aggregate productivity gains while simultaneously generating increasing inequality and reduced meritocratic alignment — these outcomes are not mutually exclusive.
- Environments that allow for independent, exploratory approaches to performance (analogous to low- q serendipity) are associated in this model with greater ranking fluidity and stronger correlation between individual capability and measured outcomes.

Frameworks Mentioned

Hawthorne Effect — The phenomenon of individuals modifying their behaviour in response to awareness of being observed — referenced as the mechanism underlying 'reactivity' in ranking contexts.

Critical Analysis

Strengths: The paper is published in a peer-reviewed open-science journal, uses transparent simulation methodology with publicly available code, and draws on a well-grounded body of empirical literature to contextualise its findings. The model's simplicity is treated honestly as both a strength (clarity of mechanism) and a limitation. The Gini coefficient and Kendall rank correlation are appropriate and well-established measures for inequality and meritocracy assessment respectively. **Limitations:** The model explicitly lacks agent memory, meaning no learning from past actions occurs — a significant departure from real organizational behaviour. Payoffs remain static regardless of how many agents adopt an action, eliminating competitive crowding effects. Network topology is absent, though the author acknowledges this. The binary choice between imitation and random exploration is highly stylised and does not capture deliberate strategic innovation. The model is a single-authored theoretical contribution with no empirical validation dataset; all real-world parallels are illustrative rather than confirmatory. No sensitivity analysis on the uniform distribution assumption for payoffs and abilities is presented. **Potential bias:** The framing is implicitly critical of ranking systems, and the model's design — while transparent — is constructed to illustrate pathologies of imitation rather than to balance potential benefits.

Organizational Practice

The article describes several real organizational practices: public relative performance feedback (PRF) adopted by large numbers of US corporations, in which workers' productivity metrics are publicly disclosed to promote diffusion of top performers' practices; performance ranking in hospitals linked to productivity improvements; university rankings based on funding attraction, student output, awards, and graduate employment; surgeon avoidance of complex procedures following introduction of public success-rate league tables in the UK; standardized testing regimes in schools associated with 'teaching to the test' behaviour; and citation-based bibliometric ranking of academic researchers associated with increased self-citation and citation exchange among co-authors.

Strategic Implications

The model's findings suggest a structural tension within PMS design: systems oriented toward broadcasting and replicating top-performer practices may produce aggregate output gains while simultaneously concentrating those gains among early leaders and reducing the alignment between individual capability and measured outcomes. The homogenization effect identified in the model implies that heavy reliance on comparative ranking signals could reduce the diversity of approaches within an organization or field over time. The dynamics around ranking mobility suggest that the effectiveness of ranking-based incentive systems may decay as rankings stabilize, potentially limiting their utility as sustained performance drivers. The academic context is identified as a domain particularly suited to empirical testing of these dynamics, given the availability of citation and career trajectory data.

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