Selecting the Best when Selection is Hard: The Persistent Effects of Luck

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Abstract

Many economic institutions and organizational practices make early success have a persistent effect on final outcomes. By granting additional resources, favorable treatment, or other forms of "bias" to early strong performers, they raise the likelihood with which these early strong performers become final winners. When performance is informative about ability differentials, such bias can serve as a tool to increase ``selective efficiency", i.e. the allocation of resources or decision-making authority to the most talented. However, in situations where noise swamps ability and effort differences in determining relative performance, such bias would have the sole effect of making luck persistent. Such an outcome would seem to be at odds with the meritocratic principle of requiring differences in economic outcomes to be attributable to ability or effort differentials. In this paper, we challenge this view. We analyse a dynamic rank-order contest where an agent's performance at each stage is the sum of time-invariant, unobservable ability, privately-chosen effort, and transitory noise. Our main result is that even as noise swamps ability and effort differences in driving performance, maximization of selective efficiency continues to require bias favoring early leaders. Furthermore, the limiting value of optimal bias is increasing in the precision of agents' initial information about the ability differential. Hence, the persistence of luck is amplified by the strategic behavior of informed agents.