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Can Perseverance Be Taught?

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Can perseverance be taught? As a psychologist who studies achievement, I am asked this question more frequently than any other.

This question is motivated by two everyday intuitions, both of which have been confirmed in empirical research: First, some people are, in general, more persistent and passionate about long-term goals. Compared to their less gritty peers, these individuals are more resilient in the face of adversity, bouncing back after failure and disappointment and otherwise staying the course even when progress is not obvious. Second, grit predicts success. Grit is not the only determinant of success – opportunity and talent matter, too. But on average, grittier individuals are more successful than others, particularly in very challenging situations.

So, can we intentionally cultivate grit in our children, in our employees, in ourselves? Relative to many other scholarly traditions, the science of behavior change is in its infancy. Still, we know enough, I think, to answer that question in the affirmative. Can perseverance be taught? Yes. Do we know how? More and more – though, of course, there is much to be discovered.

As a starting point, we should acknowledge the empirical fact that perseverance, like extraversion, intelligence, and every other trait psychologists measure and study, is a function of

both genes (nature) and experience (nurture). So, while science is a very long way from identifying the specific genes that contribute to individual differences in perseverance, we know that each of us comes into the world with proclivities, already different from one another based on the DNA we inherited from our mothers and fathers. Of course, the very same research also tells us that whatever our genetic endowments, our particular life experiences – what we see and hear, how we are treated by others, which of our actions is rewarded or punished – nudge us closer to one end of the perseverance spectrum or the other.

How do life experiences encourage or discourage grit? In my view, perseverance can best be understood within a cost-benefit rational choice framework. If our experiences lead us to predict that setting and sticking with challenging goals will turn out well, with acceptable costs and risks, then we will be inclined to endure. Conversely, if our experiences lead us to think that all things considered, we'd be better off doing something else, then we will be inclined to drop what we are doing in favor of other options. In other words, our past experiences shape our predictions of the future, and these predictions drive present-day choices.

I hasten to add that the calculations underlying these choices, and even the choices themselves, aren't necessarily transacted in conscious awareness. I don't know of anyone (other than my father) who, when making a big life decision, literally takes out a piece of paper and makes columns for benefits, costs, and their associated probabilities. Often, life decisions *feel* like they are motivated primarily by emotion rather than arrived at through cerebral calculus. Still, modern theory and research on emotion tell us that feelings are themselves the consequence of cognitive appraisals – we feel frustrated when we judge that our efforts are not yielding any progress; we feel bored when we feel that we aren't learning anything new. So, explicit or implicit, the choice to persevere is fundamentally a voluntary decision.

Unlike many decisions (e.g., what to have for lunch), choosing to endure rather than desist is a choice that must be effortfully sustained over time. This is an important difference and means grit requires not just motivation but also volition--not just resolving to achieve something important but also protecting that resolution when tempted to reverse the decision; not just committing to our goals but, more difficult than that, translating intentions into actions; not just starting things but finishing what we begin; not just zeal, as Francis Galton concluded in his 1869 treatise on eminent achievement, but also the capacity for hard work; not just want but also will.

Economists are much maligned these days for oversimplifying human decision-making. So, my colleagues in psychology might question the wisdom of casting about in neoclassical economics in search of an explanation for the origins of perseverance. After all, we all know that human beings are *not* perfectly rational in the sense of always making optimal choices. We have limitations. We err. We have bad habits. We can be myopic about the future. Of particular relevance to this essay's topic, we sometimes give up on things which, in retrospect we know we should have stuck with.

I want to argue that while the processes that govern our decision making generally lead us toward better rather than worse circumstances, it is also true that each of us is prone to bias and error. Human beings are not omniscient. We navigate the objective world via its subjective proxy, making sense of our circumstances by navigating a mental landscape that is distorted, with certain features magnified out of proportion and others unfairly diminished for emotional or attentional reasons.

Still, I think the motivational underpinnings of perseverance can be understood as maintaining high expected values for goals over extended periods of time. The grittiest individuals place high value on challenging goals, put low estimates on the costs of working toward these goals (including opportunity costs, discussed below), and hold expectations that these goals are feasible. Crucially, they continue to maintain high expected valuations for their goals despite failures, setbacks, and other kinds of adversity.

What leads individuals to think of their goals as feasible? I've found in my research that individuals who spontaneously search for changeable, specific causes of adversity in their lives are grittier than individuals who tend to catastrophize when things go wrong. In other words, optimists are grittier than pessimists. Likewise, grit is positively correlated with having a "growth mindset," believing that your ability to learn can develop with effort. Separate research on optimism and growth mindset incontrovertibly demonstrate that the belief that change is possible leads to sustained effort and the belief that change is not leads to the opposite. Related Questions

Expectations matter, but so does the value we place on what we are doing. So, another psychological antecedent to grit is how important, interesting, or otherwise valuable our goals are to us. And, too, how much we value achievement relative to other ends in life (e.g., the quality of our personal relationships, new and pleasurable experiences). So, the very rich psychological literature on intrinsic motivation, on interests, on prosocial purpose, and on values can help illuminate why some individuals seem so very passionate about what they do whereas others are less so.

Against the benefits of any goal must be weighed its costs. Living organisms have evolved to take the path of least resistance, for laziness in general conserves energy and frees up resources for other worthwhile pursuits. So, to work very, very hard at something goes against the instinct to lie around and do the bare minimum required of us. Those of us who carry the burden of hard work more lightly may do so because our life experiences have led us to pair effort, whose primary association is negative, with a secondary association that is positive. We learn to "love the burn." We develop a sense of gratification or pride after a long day of hard work. And, too, perhaps some of us simply have more energy than others, and so can be more profligate in its expenditure.

The value we place on rival pursuits, on the things we could be doing instead of what we are doing now, is another kind of cost. This is the basic economic idea of opportunity costs. If we think our next-best alternative is as good or better as what we're doing, we're more likely to switch course. For instance, we asked cadets on the day after arrival to West Point, "What would you be doing if you were not here?" We found that grittier cadets were more likely to conjure up counterfactuals that were decidedly worse than being at West Point or to remain unable to think of alternatives at all. These counterfactuals in turn explained, at least statistically, the association between grit and successful completion of summer training.

Before closing, a word about volition. A goal to which we have maintained fervent allegiance is itself inert unless we also rally ourselves to take concrete actions towards its realization. The brilliant research of Walter Mischel, Gabriele Oettingen, and Peter Gollwitzer, among others, shows that motivational and volitional processes are distinct. Motivation is necessary but not sufficient for individuals to realize their goals. In addition to holding feasible and valued goals,

therefore, individuals must also identify obstacles that stand in the way and make plans to avoid or overcome them, specifying in advance when, where, and precisely how they will take action. Then, they must take action and, since even the best laid plans can fail for any number of reasons, they must periodically review their progress and adjust their course (though not their long-term destination) accordingly.

Discussion Questions:

1. Are there cultures (Finland, China?) that encourage persistence more than others?
2. In my studies, talent and grit are often inversely correlated, that is, the more talent, the less grit and vice versa. The same inverse relation has been observed anecdotally. Why?
3. In my studies, grit and age are positively correlated. Are American youth today less (or more) gritty than their historical counterparts? Or, is the effect primarily a maturational phenomenon (i.e., grit developing with age and experience)?

Discussion Summary:

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By Angela Duckworth

The essay I posted on the origins of grit generated more direct emails to me than it did comments on the Big Questions website. I am grateful for those individuals who took the time to write, whether or not they agreed with my thesis that grit depends on maintaining high expected values for long-term goals. I would like to summarize and respond to three of the most compelling themes from these comments here.

One theme concerned the relationship between grit and talent. As I mentioned in my essay, we generally find in our studies that grittier individuals are, on average, no more talented than their less gritty peers and, sometimes, less talented. One respondent with many years of experience as a coach observed that the greatest athletes are both gritty and talented. I couldn't agree more. But if grit and talent do not typically go hand in hand, this means that such super-gritty, super-talented individuals will be rare indeed.

William Shockley ^[1] formalized this intuition in an essay he published in 1957, one year after winning the Nobel Prize in Physics. Among 160 senior researchers employed in the Los Alamos Scientific Laboratory, Shockley compared the number of scientific publications over a four-year period. He observed that about half of the scientists had published nothing at all, 30 individuals had just 1 publication, 20 individuals had 2 publications, and so on.

Why should the distribution of achievement be so skewed, with most individuals clustered together at the low end and a very few beating the average by such a dramatic margin? There is more than one possible explanation, but one very relevant to the relationship (or lack thereof) between grit and talent is that individuals who are quick studies in a field are not always the ones who endure, working consistently toward better and better performance even after they have left most, if not all, of their peers behind.

Though I don't have data to support it, my intuition is that most people are satisfied with a certain threshold level of performance and, beyond that, derive less and less gratification from their next accomplishment. Why work harder after your grade is already an A? Why work longer when you've done "well enough"? Such a satisficing approach leads to an inverse relationship between grit and talent because one is a substitute for the other. In contrast, the rare few individuals who really make history are the ones who are never sated, whose next achievement is just as important as the last. For these ambitious individuals, writing a great novel or making a great scientific discovery or inventing the world's most elegant personal computer yields only momentary gratification. Almost immediately, the eyes begin to scan the horizon for what's next.

A second theme considered whether one might have too much grit. Is the ideal amount of grit some Aristotelian golden mean between total tenacity and complete caprice? I don't think so. Rather, I think that *ceteris paribus*, the capacity to be gritty about what you really care about it is a monotonically positive good. Even if the marginal benefits of additional grit diminish the more grit you have, there is no point at which you could say that this capacity is injurious. What is bad, I think, is grit in the absence of other virtues. Woe to the individual who has grit without empathy, or grit without wisdom, or grit without honesty. Grit is only one of a constellation of character strengths worth admiring and cultivating. Virtue is plural.

The third and final theme I'd like to comment on is whether I believe achievement in the conventional sense to be the penultimate concern for humankind. I do not. As a psychologist, I am keenly interested in achievement, but as a mother, wife, friend, teacher, neighbor, and mentor, my horizons are broader. Marty Seligman has proposed that, in addition to achievement, a flourishing life includes pleasure, engagement, strong social relationships, and a sense of meaning and purpose. I couldn't agree more, except to leave open the possibility that even this list is likely incomplete. Moreover, I do not think that we can weigh the worth of an individual's life solely on the scales of his or her own well-being. It matters, too, how we change, for better or for worse, the people around us.

Can perseverance be taught? Yes, I think so. Should it be taught? Again, yes, among other strengths of character. Is it the only thing that contributes to achievement or, more broadly, to a life well-lived? No, not at all, and throughout the long journey toward deeper understanding, let us remember not only to be gritty, but also humble, in our efforts.

New Big Questions:

1. Is there such a thing as being too persistent?
2. Why do some people have more consistent interests or goals over time than others?

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