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Big C, Little C, Howard, and Me: Approaches to Understanding Creativity

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Approaches to Understanding Creativity

An Essay for a Festschrift in Honor of Howard Gardner

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About 20 years ago, I had the pleasure of attending a small conference on creativity convened by Howard Gardner and David Perkins at the Harvard Graduate School of Education. It was an intense weekend, with many deep, wide-ranging discussions on the nature of creativity, approaches to studying creativity, and the possibility of stimulating or facilitating creativity. I no longer recall all of the topics, or even all of the conference attendees, but one conversation stands out in my mind. It had started with the group considering progress in creativity research over the previous decade, trying to look into a future for the field that we would – we hoped – be instrumental in fashioning. Howard made an eloquent and impassioned statement about the importance of focusing on truly eminent creative individuals, like Freud and Picasso. I spoke just as passionately (though, I'm sure, less eloquently) about how crucial it was to understand more ordinary levels of creativity, like the work that produced the new theories, paintings, songs, and medicines making their appearance each year.

Although we weren't using these terms, Howard was talking "Big C" creativity, and I was talking "Little c." In the realm of scholars thinking about what makes people more or less creative, he was focusing on the "more" – the forces operating on people who are more highly creative, over time, than anyone else. I was focusing on the "more

or less" – the forces that can make any individual more or less creative in a given moment.

The question that nagged me that day, and nags me still, is whether we were talking apples and oranges. Does it make sense to call both "creativity"? Is there a single underlying process? What sort of understanding could each approach provide, and could they ultimately yield similar – or at least complementary – answers? My aim in this essay is to explore these questions and, I hope, offer some new insights. In the process, I aim to highlight some of the astonishing contributions that Howard has made to our understanding of this most astonishing form of human performance.

Howard Gardner's "Big C" View of Creativity

In his 1993 masterpiece on creativity, *Creating Minds*, Howard defines creative works as "the small subset" of works in a domain that are ever deemed to be "highly novel, yet appropriate for the domain" (p. 38); these works "actually cause a refashioning of the domain." Howard's massive study, reported in that book, focused squarely on the creative individual as the primary unit of analysis, with "creative individual" defined as "a person who regularly solves problems, fashions products, or defines new questions in a domain in a way that is initially considered novel but that ultimately becomes accepted practice in a particular cultural setting" (p. 35).

Howard did a deep, nuanced exploration of the life and creative work of each of seven individuals who, unquestionably, refashioned their domains (that is, their disciplines or arenas of practice): Sigmund Freud, Albert Einstein, Pablo Picasso, Igor Stravinsky, T. S. Eliot, Martha Graham, and Mahatma Gandhi. Howard began with "focused biography," reviewing multiple sources for the basic storyline of the

individual's entire life, but intensively examining periods during which the individual was conceptualizing, fashioning, and experiencing reactions to his or her most important works. Applying his primary lens of cognitive developmental psychology, but informed by historical, sociological, biological, epistemological, and other psychological perspectives, Howard created rich tapestries of creative lives. Woven throughout these tapestries, we see Howard's analyses of the psychological, social, and cultural forces that appear repeatedly in these lives – and, occasionally, distinguish these lives from each other. His analyses are dynamic and complex, informed by and contributing to a grand organizing framework.

Clearly, Howard's view is a Big C view of creativity, and his approach is a Big C approach. He writes, "There is a sense – for which I do not apologize – in which this study of creativity reflects the 'great man/great woman' view of creativity," (p. 37). Like most scholars working in the field, he uses novelty and appropriateness as the hallmarks of creative work. That is, when viewed by the domain experts who constitute a particular field, a creative work is seen as both novel and valuable. Where Howard stands out – though he does not stand alone – is in his focus on the very highest levels of pioneering achievement within a given domain. Howard writes admiringly of Howard Gruber's deep studies of how eminent individuals, such as Charles Darwin, developed path-breaking ideas over long periods of time. Gruber's approach is the model on which Howard builds his study.

This approach bears an enormous methodological advantage: In terms of creativity assessment, it is the firmest ground upon which a creativity scholar can stand. There is no *need* to be concerned with assessing creativity, if you focus on what Howard

calls "*unambiguous* instances of creative processes, as embodied in the behavior and thinking of productive artists, scientists, and other workers" (p. 22). His ambition, one that I believe he largely achieves, is to produce not only fascinating individual cases but also "generalizations that can elucidate creativity within and across domains" (p. 27). Howard proposes that the deep study of *widely-recognized* creative individuals, whether by his method or by historiometric studies of the socio-cultural forces operating on large numbers of such individuals across history, are the approaches most likely to yield deep insights into creativity.

My "Little c" Approach to Creativity

In contrast to Howard, I am *very* concerned about assessing creativity. That's because I try to understand the social-environmental forces that, in a relatively short period of time, can dampen or enhance creativity. This necessitates a "Little c" approach to creativity – or at least it rules out a true "Big C" approach – because my research team and I are extremely unlikely to be there to observe the day-to-day or moment-to-moment fluctuations in the creative output of the world's great men and women.

Like Howard, I define creativity as appropriate novelty that is recognized as such by people knowledgeable in a domain. As in Howard's view, the task or problem must be open-ended, such that no path to the end point is readily apparent, and there must be an observable idea expressed or product generated. Unlike Howard, I explicitly assume an underlying continuum of creativity for work in any domain of human activity, from quite modest through globally-acclaimed "genius" levels.

I assume that, at the highest levels of creativity (that is, the pioneering levels of novelty that turn out to have value for a domain), novelty is much more readily identified

than appropriateness. It's seldom difficult for experts to see that something is radically different from what's been done in a given domain. However, getting domain experts to agree that a radically new contribution is truly valuable is much more difficult, often requiring the test of time. In my research, I circumvent this problem by asking experts to assess the relative creativity levels of less radically new works, produced by non-eminent people. This consensual assessment technique (CAT) for the operationalization of creativity has been used by many creativity researchers since it was first published in 1982.

Interestingly, my own journey to understand creativity, which started in the mid-1970s, began with immersion in the lives and works of great men and women. As a graduate student in psychology at Stanford, I spent days in the library stacks pulling out books that might help me understand the everyday psychological experience of doing creative work, from the perspective of those who had actually done such work. I realized that if I didn't see a force operating on the creativity of these individuals, I would be hard-pressed to claim that it illuminated anything important about creativity more generally. Reading the autobiographies, letters, journals, biographies, and other material on people like Albert Einstein, Pablo Picasso, Anne Sexton, Sylvia Plath, and Pablo Casals seemed like the obvious place to start.

Given my training as a social psychologist and my interest in motivation, I was fascinated when I discerned a phenomenon in these materials that, as far as I could tell, had not been treated systematically in the psychological literature. The immediate social environment appeared to influence the quality and novelty of output – as well as the sheer

volume of output – of even widely-recognized creative individuals, across relatively brief periods of days, weeks, or months.

For example, as Howard notes in *Creating Minds*,, Albert Einstein had a "vexed relation to formal education," exhibiting a "strong dislike of the regimentation that characterized most German schools at the time" (p. 91). In 1975, when I first read Einstein's own writing about his life and work, I was struck by certain incidents he described at a particularly militaristic school in Germany. There, the pressures to regurgitate material learned by rote, for final examinations *in science* – the domain he had loved since pre-school years – had a profoundly negative effect on him. As I quote Einstein in my 1983 book (p. 7), "This coercion had such a deterring effect upon me that, after I had passed the final examination, I found the consideration of any scientific problems distasteful to me for an entire year." I found numerous examples that seemed similar, across the writings of and about eminent creative people across domains.

Motivation appeared to be especially affected, in a negative direction, by the types of external pressures that Einstein described. In particular, intrinsic motivation – the drive to engage in an activity of one's own volition, one's passion for the subject, appeared to erode under strong external inducements or constraints. This observation led me to formulate a hypothesis about one previously-unrecognized force that could, potentially, affect the ability of *any* individual to produce novel, appropriate work. I called it the *intrinsic motivation hypothesis of creativity*: People will be most creative when they are motivated primarily by the interest, enjoyment, satisfaction, and challenge of the work itself – and not by external pressures or inducements.

My desire to understand whether, and under what circumstances, the intrinsic motivation hypothesis might describe reality – and a desire to nail down the *causality* it implied – led me to experimental methods and, necessarily, to a Little c approach to studying creativity. For example, in one experiment I published with Beth Hennessey and Barbara Grossman in 1986, we examined the effect of rewards and choice on the artistic creativity of undergraduates. A simple 2 x 2 factorial design was used, in which participants were either offered or not offered a monetary reward for making a paper collage, and they were either given choice or no choice about doing the collage activity.

Notice that the crossing of reward and choice altered the meaning of the reward. In the reward-choice condition, where participants were essentially asked to enter into a contract with the experimenter in order to obtain the money ("Are you willing to make a collage for this monetary payment?"), we expected the external inducement to undermine creativity. In the reward-no choice condition, by contrast, there was no such inducement. The reward was simply a bonus that participants were given in return for the collage activity and, thus, we expected no creativity decrement below the no reward-no choice condition. This pattern is, in fact, what we found. Moreover, across all conditions, expressed enjoyment of the collage activity (a key aspect of intrinsic motivation) correlated significantly with creativity.

As in all of the experiments I conducted with my students and colleagues, the CAT was used; creativity was assessed by judges knowledgeable in the domain (in this case, artists). Because their independent ratings showed acceptable inter-rater reliability, the consensus (mean) creativity ratings were used as the dependent variable. This, and several other experiments we conducted in those early years, supported the intrinsic

motivation hypothesis – which, eventually, re-dubbed the "intrinsic motivation principle of creativity."

Although I recognized that the primary shortcoming of this research lay in its external validity, I gained confidence from its strong internal validity in identifying causal effects of the social environment on creativity, and from its reliance on the expert assessment of actual products.

Still, as I carried out this research over the 1970s and 1980s, I read, admired, and learned from Big C approaches like that of Gruber, used examples from Big C creators in my writing, and believed that Big C researchers and I were studying the same phenomenon at very different levels. In reading these Big C studies, I saw, repeatedly, the importance of passion – strong, abiding intrinsic motivation. I also found hints about the social-environmental factors that might undermine creativity, which I conceptualized as ways to "kill creativity." These gave me ideas for independent variables to study in my quest to investigate the intrinsic motivation hypothesis of creativity, variables in addition to contracted-for reward – such as expected evaluation, surveillance, competition with close peers, and constrained choice in how to do an activity.

In my empirical research during those years, I focused my investigations on the act of creating something and the social-environmental forces operating in the immediate situation. I didn't even try to examine the larger social/historical context, as Howard ended up doing. My interest lay in deeply probing one aspect of creativity: the effects of the immediate environment on individuals engaged in work that allows for creativity – particularly, the effects extrinsic motivators and constraints.

More recently, leaving behind – or, at least, going beyond – experimentation, I've tried to delve deeper into the impact of the immediate environment by looking at day-by-day influences on the psychological state and the work of people explicitly *aiming* to be creative in a profession. Inspired by the Experience Sampling Methodology (ESM) developed by Howard's collaborator, Mihaly Csikszentmihalyi, I realized that new discoveries could be made by "eavesdropping" on people's psychological states in the real world (in contrast to manipulating psychological states in artificial laboratory settings). With my research team, I developed a method for assessing daily psychological state, and unobtrusively "trapping creativity in the wild."

The method involves sending daily electronic diary forms to study participants, each work day, during the course of a creative project they are doing within their organization. (A "creative project" is defined as one for which a successful outcome requires novel, appropriate ideas.) The form contains scale-rated items assessing that day's emotions, intrinsic and extrinsic motivation, and perceptions of the work environment. It also contains an open-ended item asking participants to briefly describe one event from the work day that stands out in their minds. Importantly, participants were not told that the study focused on creativity or that we were interested in hearing about their creative ideas. This method yielded nearly 12,000 days of diary reports from 238 professionals (such as R&D scientists, marketing specialists, and product designers) working on 26 creative projects in seven companies in three industries.

Additional data include various performance measures. Creativity was assessed consensually, through ratings of each participant's work by colleagues and supervisors. We also obtained a quasi-behavioral measure of creativity by coding as "creative

thinking" any participant's mention of having solved a complex problem or come up with a promising new idea on a given day.

This research program has yielded new insights about creativity and about the psychology of everyday work life. We still define creativity as novel, useful ideas in a domain, but now we understand more about how creativity happens – and how it gets impeded – day by day. Specifically, we determined that creativity is enhanced not only when people experience stronger intrinsic motivation, but also when they experience more positive perceptions and emotions. For example, in one set of analyses, we discovered that people are not only more likely to produce creative ideas on a day when they are experiencing more positive affect (relative to their own baseline affect), but they are also more likely to produce creative ideas the next day – even taking into account the next day's affect. Moreover, by coding all specific events described in the diary narratives, we discovered *the progress principle*: Of all the events that distinguish the days of most positive psychological experience (most positive affect and work environment perceptions, and strongest intrinsic motivation), the single most prominent is simply making progress in meaningful work. This progress principle applies even for incremental steps forward – "small wins," in the terminology of Karl Weick.

This recent work does move out of the realm of true Little c creativity. But, still, the creativity my colleagues and I "trapped" is not likely to make any of its creators eminent. Of the few hundred instances of creative thinking that we identified in the 12,000 diaries, only one could be considered a breakthrough – something that revolutionized its industry. So, it's not Big C creativity. I guess it would be "Middle C,"

or what James Kaufman and Ron Beghetto call “Pro c” – professional creativity that is above the level of “garden variety” Little c, but below the level of truly eminent Big C.

In all of the work I’ve done, my fundamental assumption has been that I’m illuminating something essential about creativity, from the most modest levels of creativity I studied in the lab, to the higher levels of creativity I studied in R&D scientists and other professionals, to the Big C creativity dissected by Howard. I have always believed that, by triangulating from different empirical approaches to questions of creativity, across all levels, we would better approach a deep understanding of this fascinating human act in all its complexity.

Why the Different Approaches?

I don’t know why other creativity researchers have taken the Big, Little or Middle C approaches, but I believe I have some insight into why Howard and I have taken our different paths. Drawing on what Howard says about his own journey in his Preface to *Creating Minds*, my conversations with him over the years, and … well… my rather close knowledge of my own history, I will sketch a quick portrait of the forces influencing each of us.

Howard loved to read about history, culture, and art as a kid. I loved reading about science and doing experiments on things like plant nutrition in the basement of my childhood home. He is trained as, and spent years working as, a cognitive developmental psychologist; the “symbol systems” (to use his term) of that discipline invoke continuity and change in cognitive processes across long periods of time. My discipline is social psychology, the central focus of which is understanding the influence of the social environment on individual psychological states and behavior.

Howard thinks big. His ambition, it appears, is nothing less than illuminating the complexity of the human mind. By my rough count, something like 75% of the 20 or so books that he has solo-authored include the word “mind” in the title. (Let us pause for a moment to reflect on that remarkable accomplishment – 20 substantive solo-authored books, in addition to several co-authored books.) The framework that Howard presents in his 1993 creativity book is big, too. It includes the cognitive-developmental view, with an overlay of what Howard and his colleagues call an “interactionist perspective” – a perspective articulated in a 1988 chapter by Mihaly Csikszentmihalyi. This perspective uses an interdisciplinary lens, with its proponents insisting that creativity can only be understood as an interaction between individuals, the domains in which they are working, and the field that consists of experts in the domain. This is truly a complex-systems approach to creativity.

In contrast, I have written many more articles than books, and many of those articles have a phrase like “The effect of _____ on _____” in the title. I enjoy looking at something that I can hold in my empirical hand and put under my metaphorical microscope. Howard enjoys opening his arms wide, trying to grasp a phenomenon at its most complex, even while acknowledging that it’s not something to be completely grasped.

I love elegant simplicity, believing that we can build toward complexity when we understand key mechanisms. Howard loves confronting complexity head on, holistically, in all its messy glory. He described the trade-off beautifully when he said, in a 1988 chapter, “By adopting a holistic approach, one encompasses creative phenomena at their

full level of complexity – yet at the cost of spurning methods that are more rigorous but less encompassing."

Summarizing the Contrasts (and the Similarities)

So far, I have been focusing on the contrasts between Howard's approach and mine. Table 1 summarizes them. I think of these contrasts as falling into four overlapping categories: overall focus (on the macroscopic versus the microscopic); level of creativity examined (highest versus low-to-moderate); view on the distribution of creativity in the general population; and methodological approach.

Insert Table 1 about here

But there are fundamental similarities in our approaches, as well. For both of us, creative work is defined as novel and appropriate. We both aim to discover generalizable principles. We both insist that creativity judgment is culturally and historically bound, with the object of judgment being a work or body of works, and we both require that there be consensual agreement on creativity by individuals knowledgeable about the domain in which the work was produced. For this reason, we both eschew paper-and-pencil creativity tests. Both Howard and I maintain that creativity is domain-specific, depending on special talents, skills, training, and experiences that individuals may or may not have in a given domain of endeavor. Nonetheless, I believe that, increasingly, the highest levels of creativity are being demonstrated by individuals who integrate expertise across seemingly disparate domains. I think Howard would agree.

Other creativity scholars with whom Howard and I have worked, and/or who have influenced us in notable ways, vary considerably in their approaches. Not surprisingly, the colleagues with whom Howard has had most of his creativity discussions, Mihaly Csikszentmihalyi and David Feldman, tend toward the Big C viewpoint. The 1994 creativity book that the three coauthored, after a decade of discussions, is entitled *Changing the World*. In it, they define their focus on creativity "as the achievement of something remarkable and new, something which transforms and changes a field of endeavor in a significant way" (p. 1). I should note, however, that, in that same paragraph, the three admit the validity of other views on creativity. Moreover, the other writings of Csikszentmihalyi, Feldman, and Howard's other close colleague, David Perkins, suggest a view that encompasses other levels of creativity, as well.

My closest creativity-research colleague, Beth Hennessey, has made notable contributions studying the Little c creativity of children. Others with whom I have published creativity papers, including Karl Hill, Regina Conti, and Colin Fisher, have also focused on non-eminent levels of creativity. Dean Keith Simonton and Robert Sternberg, who have influenced both Howard and me, differ in their perspectives. Simonton uses data on Big C creative individuals for his historiometries, while Sternberg's creativity studies have used ordinary people as subjects. I think it's safe to say that the vast majority of empirical scholarly papers (and books) on creativity take the Little c or Middle c approach.

I contend that the Big C and Little c approaches really illuminate different aspects of the same thing. But is this a reasonable view, when there are such obviously yawning gaps between the creativity of the collages that Beth and I have had our subjects make

and even the least celebrated of Pablo Picasso's artworks? I think it is. A horse on a treadmill will help make the case.

A Reconciliation: The Horse on the Treadmill

I have always believed that Howard and I were studying the same phenomenon. I'm not sure he would agree. But I think that, if pressed, he might. There are hints, in his own writings, of a fundamental belief in an underlying continuum of creativity. Consider a statement from a chapter he wrote in 1988 which, on the face of it, denies the utility of studying anything but Big C creativity. He said that scholars should first "develop a framework by which one can adequately conceptualize lifetime achievements of the magnitude of Freud's. We can then determine if it is possible to lower our sights […] still retaining what is integral to the processes of creativity […]" (p. 299). This statement at least holds out the possibility that, to Howard, the same processes may describe both lower and higher levels of creative work. In other words, I am hopeful that a reconciliation of our Big C – Little c views is possible.

How might a continuous underlying process give rise to qualitatively different outcomes? Research on dynamical systems shows how this is possible; I think the analogy to creativity is apt. The specific system in this analogy is that of a horse on a treadmill. The observable gait of the horse is analogous to the observable level of creativity in a product; the treadmill, which increases its speed in a continuous manner, is analogous to the underlying continuum of creativity. When the treadmill begins moving slowly, the horse walks. At some point, the speed of the treadmill becomes fast enough that the horse's movements become qualitatively different; the horse is now trotting. At some later point, the horse breaks into a canter and, finally, a gallop. A continuous,

quantitative change in the speed of the treadmill has produced qualitatively different gait patterns in the horse.

If the system is complex enough, and the creative process is undoubtedly very complex, it is possible for the distribution of actual products in a domain to be highly skewed. In this distribution, nearly all products in a domain would exhibit no or low levels of creativity and, as levels of creativity rise, dramatically fewer products appear. Even between high levels and the very highest levels, there would be large apparent gaps in the quality of the products. Big C creativity might look like a different thing from Middle c or Little c creativity – just as a gallop is quite a different motion from a canter or a trot – but both arise from quantitative changes in the same underlying process.

This conceptual reconciliation of the Big C, Middle c, and Little c approaches can be complemented by observations that the different approaches have, indeed triangulated on some of the same insights into creativity. I'll describe two.

First, all of these approaches have revealed the central importance of intrinsic motivation for creativity – with moderate (or higher) levels of interest being necessary for Little c creativity, and driving passion (even obsession) necessary for Big C creativity. I have already reviewed the evidence for the intrinsic motivation principle of creativity, which arises from both experimental research in laboratories and non-experimental research in organizations. Howard's 1993 book documents the central role of intrinsic motivation for the work in the lives of his seven creators. Using a construct described in Csikszentmihalyi's 1990 book *Flow*, he invokes the importance of the highly desirable "flow state." He says, "In such intrinsically motivating experiences, which can occur in any domain of activity, people report themselves as fully engaged with and absorbed by

the object of their attention. […] Such an analysis helps explain why creative individuals continue to engage in the area of their expertise despite its frustrations […]" (pp. 25-26). In describing the domain interests of the creative individuals who are his objects of study, Howard uses terms such as "consuming" and "intoxication." He even finds evidence of slow periods in creative individuals' work lives, when their creative productivity slowed down from a gallop – possibly due to social-environmental influences on their intrinsic motivation.

A second discovery common to all of these levels of analysis is the importance of a supportive environment. My research on the work environments conducive to creativity within organizations suggests that key elements include supportive supervisors (who, for example, allow autonomy in deciding which problem-solving avenues to pursue and provide both the resources and the time necessary to seek out new solutions) as well as supportive colleagues (who, for example, are open to new ideas at the same time that they engage in vigorous debate of those ideas). One of Howard's discoveries in his study of creative individuals concerns the affective and cognitive support needed around the times of their major breakthroughs. Along the affective dimension, "the creator is buoyed by unconditional support" and, along the cognitive dimension, "the supporter seeks to understand, and to provide useful feedback on, the nature of the breakthrough" (p. 385). For Freud, for example, this role was played by Wilhelm Fliess. For Picasso, it was played by Georges Braque.

I believe that, if we – as a field of creativity researchers – can continue to approach the phenomenon from multiple levels of analysis, we will move closer to capturing it both comprehensively and rigorously.

Howard's Contributions

It is difficult to overestimate Howard Gardner's contributions to intellectual discourse around the world over the past 40 years. His research and writings have had a significant impact on multiple fields, including cognitive-developmental psychology, education, ethics, and creativity. Surely, his name will be among any list of the most influential thinkers of the late 20th and early 21st centuries.

His contributions to the field of creativity alone are immense. At a deep level, he has furthered our understanding of the special (and perhaps unique) combinations of talent (intelligences), acquired expertise, passion, work ethic, personality traits, and personal circumstances that have yielded some of the most universally acclaimed creative works of the modern era. His insights span domains and cultures.

Howard has influenced my own creativity research and writing in a number of ways. *Creating Minds*, his 1993 masterpiece, convinced me that the undermining of intrinsic motivation by the social environment is less likely for Big C than for lower levels of creative productivity. I infer that this may be due to a simple depletion effect; Big-C creatives start out at a higher level of passion for their work, making it less likely that ordinary extrinsic motivators and constraints will seriously damage their intrinsic motivation and creativity. This insight, combined with my own continuing research on the intrinsic motivation principle, led me to refine that principle in my 1996 book, *Creativity in Context*. Specifically, in a paper published the same year as Howard's book, I identified a "motivational synergy" process whereby increases in certain extrinsic motivators, such as tangible rewards, could add to (rather than detract from) intrinsic motivation. An empirical discovery that my students and I made around the same time,

that intrinsic motivation has a stable, trait-like aspect as well as a state-like aspect, dovetailed with Howard's observations on high-level creators and led me to refine the intrinsic motivation principle further.

Howard's work has led me to think more broadly about the environment for creativity. Because of him, I have developed a richer view of creators interacting with their social environments, both *immediate* (parents, siblings, friends, teachers, colleagues, patrons, and competitors) and *distant* (audiences and gatekeepers in the field). Howard has spurred me to think hard about the nature of creativity, struggling with the issues I've discussed in this essay: Can I reconcile his work on creative genius with mine on garden-variety creativity? What *is* creativity? How does it work? And *who* is creative? When, under what circumstances? And his more recent work, captured in *Good Work* (his 2001 book with Cskiszentmihalyi,& Damon) has led me to confront and write about myths of creativity – especially the myth that creativity is necessarily morally good.

I will end on a personal note. Through his *Good Work* writings and speeches, and through our private conversations over the years, Howard has inspired me to take my work into the world. He has convinced me of the responsibility that we have, as scholars, to bring our insights and guidance to other scholars and to practitioners who might use it. Only by rendering our findings comprehensible, and by trying to ensure that they are used appropriately, can we aim to truly make a positive difference in the world.

I believe that Howard Gardner has already accomplished this goal. For that, we should all be grateful.

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Table 1

Contrasts between Howard Gardner's and Teresa Amabile's

Approaches to Studying Creativity

Howard Gardner's "Big C" Approach	**Teresa Amabile's "Little c" Approach**
Pathbreaking creativity, at the frontiers of a domain, recognized by knowledgeable people as outstanding – surpassing (in novelty and appropriateness) all or most others in the domain	"Garden variety" creativity, where one non-eminent individual's work product is viewed by knowledgeable people as more or less creative (novel and appropriate) than others', on a given task in a given domain
Focus on person as the unit of analysis	Focus on product as the unit of analysis
Macroscopic panoramas: the entire phenomenon and all its influences, across the lifespan	Microscopic close-ups: social-environmental influences across brief periods of time
"Holistic" approach	"Normal science" approach
Categorical view; implicitly assumes that only some (a very few) are creative in any domain	Continuum view; assumes all humans with normal capacities are capable of some degree of creativity in some domain
Social environment conceived as particularly important people playing a role in the development of a creative person's life and work	Social environment conceived as any people influencing the individual in the immediate situation
Broad insights into a few outstanding individuals, and the most remarkable new, appropriate ideas in the world	Narrower insights into many individuals, and most new, appropriate ideas in the world
No need for a creativity assessment method	Need for a consensual assessment method for identifying degrees of creativity in products
Frequently uses the term "creative person," applying it only to those who regularly produce work widely recognized as creative	Agrees with Gardner's definition of "creative person." But seldom uses the term "creative person," because many take it to mean that a person produces novel, appropriate ideas in all activities, all domains. Moreover, many use the term colloquially to describe eccentrics.