

Creativity and Aging: a Mini-Literature Review

Creativity research has proven to be a very interesting and multidimensional field of study within psychology. The approaches in creativity research run the gamut from psychometric, to personality and individual differences, to creative cognition, the social context of creativity, and the systems model, to name a few. During the course, we have plunged into the relationship of creativity to family background, divergent thinking, insight, motivation, intelligence, environmental factors, multiple intelligences, problem-finding and problem-solving, and a host of other concepts and directions. From such panoply of ideas, how was one to choose a topic that stood out from the rest?

Before starting in on the aspect of creativity that is the subject of my paper, I would first like to describe a little of the process I used to come up with my topic. My first step was to survey myself as to the theories or approaches we studied that appealed to me the most, and into which I wanted to probe more deeply. My first candidate was Amabile's componential conceptualization of creativity. I liked the comprehensiveness of her theory and the way it encompassed "cognitive abilities, personality characteristics, and social factors" into a coherent whole (1983). The three components of domain-relevant skills, creativity-relevant skills, and task motivation seemed to account for the multidimensionality not just of the creative person, but also the creative process and the creative product. I went to the library and borrowed *Creativity in Context*, the 1996 update to her original book, *The Social Psychology of Creativity*. I read the Preface to get a quick understanding of the major revisions, and then started thumbing through the chapters. I spent a number of hours on several occasions just looking through the book, reading bits here and there, before going back to Chapter 8, "Other Social and Environmental Influences." My eye was caught by the sentence, "[b]y far, the largest systematic program of research in the social psychology of creativity is that conducted over the past 8 years by D. K. Simonton." I decided to search for Simonton's articles in PsycArticles, PsycInfo, Ebsco Academic Search Premier, and other databases. It turns out that Simonton has a wide range of interests that focus on "...the broad social and cognitive effects that are expressed as changes in creativity across the life span." This sounded intriguing so I looked at the list of references at the back of Amabile's book and decided to do a search for those articles that combined the subjects of creativity and aging. The search returned nine articles, of which six were "on topic" (half of

which were written by Simonton). I decided to use that small group of articles (small in number but not in total pages!) as a sample of what is being published on the topic of creativity and aging. The articles were published between 1988 and 2000 and provide an opportunity to see not only how individual researchers approached the topic, but whether any common conclusions or insights were being expressed.

The articles fall into two broad categories: 1) results of studies involving specific groups of older persons; 2) general overviews or “what is known about creativity and aging” at different points in time. I will begin with the overviews.

The first article by Simonton (1988) examined “the substantial literature on the longitudinal connection between personal age and outstanding achievement in domains of creativity and leadership.” The first part of the article dealt with empirical issues which looked at real-life achievements rather than results on more abstract psychometric tests. This pleased me greatly as I find the technical nature of such discussions - not to mention the mathematics involved - a bit dry and complex. What did appear rather artificial to me was the fact that he intended to report on creativity and leadership as well. I wondered at his statement that “...we can argue that creativity and leadership are two facets of the same fundamental phenomenon, exceptional influence...” (p. 251) I am not convinced that creativity can be characterized as mere influence, even if it is exceptional. That outstanding achievements such as the theory of relativity or the Sistine Chapel paintings made Einstein and Michelangelo famous and influential is true, but that was a consequence of their creative genius.

A finding that seems very secure is that if plotted as a function of age, creative output rises fairly rapidly to a definite peak and then declines gradually until output is about half of what it was at the peak (p.252). Interestingly, he found that where that peak occurs (in terms of age), as well as how much it declines, can vary depending on the domain. For instance, writers of lyric poetry, pure mathematics, or theoretical physics seem to peak around the late 20's or early 30's. On the other hand, in domains such as novel writing, history, philosophy, medicine, and general scholarship, the peak may not occur until the late 40's or 50's and have a minimal drop-off afterward. This was certainly good news, if true! Another extremely interesting finding that tends to strengthen what was said above, is that the interdisciplinary contrasts do not appear to be arbitrary, but hold across different cultures and historical time periods.

Another finding was, briefly, that those individual creators who are the most productive will also tend, on average, to be the most creative; individual variation in quantity is positively associated with variation in quality (p.254). What this appears to mean is that either the earlier one gets started, or the rate at which one produces, makes it more likely that at least statistically, one's chances of making a significant contribution increase. Age is not necessarily the significant or determining factor.

A long section on methodological issues followed in which Simonton explained the "compositional fallacy" which he describes as an artifact that occurs "...when individual attributes are aggregated in such a way that observed relationship among the variables reflect the manner of aggregation rather than the actual correlations occurring at the individual level of analysis." (p. 257) This stands to reason and I have always wondered how social scientists (and other researchers) can be sure that they are actually measuring what they say they are measuring. It appears that so much depends on a water-tight research design and also the kinds of statistical analysis used after the fact.

The theoretical perspectives he discussed next were grouped into extrinsic and intrinsic factors. Extrinsic factors that may influence the age curves seen in the empirical work include physical health, increasing parental responsibilities, and expanded administrative duties. Simonton's belief is that extrinsic factors, while playing a significant role, nevertheless do not meet the hurdle of explication, pointing out, for example, that Darwin and Beethoven both suffered from chronic illnesses without substantial impairment in output (p.259). The discussion then moves on to intrinsic factors and four perspectives are discussed. Without going into a great deal of detail regarding the models, it is interesting to note what Simonton had to say about creativity tests and the psychometric models in general. He makes a number of points about whether tests actually measure what they are purporting to measure and states that "...even if some theorists have defended the distinction between domain-specific and creativity-specific skills (e.g. Amabile, 1983) it appears that creativity in many disciplines is so domain specific as to preclude measurement by the class of generalized proclivities examined in the typical creativity test" (p. 261).

The main insight that I gained from Simonton's article was that: 1) the determination of a peak in creative production is dependent on the starting and ending points of a career, and so is not necessarily age-dependent.

The next article, also by Simonton (1991), was written for a lay audience and was thus shorter and easier to read! He began with the main empirical observation mentioned above about the plotting of creative product output as a function of age and remarked that it is the latter portion of the age curve that seems to "...shatter the hopes of those wanting to continue creativity in the final half of life." (§ 4) The picture is not as bad as it appears, however, and he goes on to suggest six considerations that may come into play. These include: exceptions to the generalized age curve, the magnitude of the decline, the variation across disciplines, whether one is talking about quantity or quality, individual variation, and the possibility of a second peak. One of the more interesting points he made was the supposition that so-called "late bloomers" may not get fully into stride until they reach the ages at which others are leaving the race, which implies that people should never despair of "starting out" on a creative pursuit in their later years. Another point is his belief that sometime in the late 60's a resurgence in output often appears - a secondary peak - that while not being as pronounced as the that appearing in the "prime of life" nevertheless tends to contradict the "...supposed inevitability of the downhill slide." (§ 13)

The third article, also by Simonton (2000), and thus published almost a decade after the last one I reviewed (although his output in the 90's continued to amass impressively!), was written for a professional audience but only reviewed the highlights taking place in creativity research. Among the newer areas of research, he found four to be worthy of special mention: insightful problem-solving, creative cognition, expertise acquisition, and computer simulation. The work of Ward, Smith and Finke (1995) was mentioned in the section on creative cognition, with Simonton observing that an exciting feature of their experiments is "...the use of open-ended problems that demand genuine creativity, in contrast to much laboratory research that relies on problems that have fixed solutions." (§ 6) I highlighted that sentence as being especially noteworthy as it confirms my earlier comment about the perceived artificiality of some of the empirical studies that we have read about.

The section on personal characteristics gave a nod to Gardner's theory of multiple intelligences and again underscored the point that creativity is as much a dispositional as an intellectual phenomenon. He addressed, albeit briefly, the relationship between creativity and aging in the section titled "The actualization of creative potential." Here he cites his own research as well as that from Csikszentmihalyi (1997) and Dennis (1966) to reassure baby-boomers that the inverted backward J curve is not set in stone. Before leaving this category of research overviews, I would like to state that I found it very helpful and revealing to read a number of articles by the same author. Not only did it provide a clear idea of the development of his ideas and research interests, but through his citing other researchers, helped me to frame the whole area of creativity research in general.

The last three articles each addressed specific populations or groups of people. The first article, from George E. and Caroline O. Vaillant (1990), was a follow up study of the relative creativity of forty women who had been followed for 65 years in a famous study conducted by Lewis Terman. The article described some of the findings that had occurred over the long course of the study and many of them were fascinating. Briefly, they found that the women in general were precocious, in terms of mental and physical development early in life; that their mental health was demonstrably better than that of their classmates; that their IQs (average was 155) may have been less the result of environmental privilege as "biologic potential" as evidenced by the fact that 74 as many times as many of their children as would be expected by chance had IQs over 170; and that successful career and childrearing were negatively correlated!

The Vaillants used a definition of creativity roughly stated as "putting something in the world that was not there before," such as publishing a book, starting an organization, creating public art or music. The authors interviewed and rated the women on a number of scales. They found that the so-called creative women had been more interested in accomplishing an active life for themselves outside the home and they also appeared to make more imaginative use of their leisure time than the women who 'just had creative hobbies.' On the measure of "putting things in the world" it is noteworthy that 9 of the 20 most creative women continued to create after the age of 65. The Vaillants note, however, that they believe this finding to be more a "...reflection of their escape from prior societal inhibition than it was evidence that creativity normally peaks late in life." (p. 613)

Items on which the high and low creativity groups could not be distinguished included IQ, their parent's level of education, social class, number of books in the home, or parental support for a career. Intriguingly, creativity was facilitated by either having a supportive husband or no husband at all (and not being the sole support of their parents). About half the women in each group had little or no education beyond college. The authors concluded their study by observing that an essential ingredient in notions of creativity is play, and that they suspected that the capacity for play might be a critical ingredient for successful aging(p. 616).

The next article was a study by Martin S. Lindauer, Lucinda Orwoll, and M. Catherine Kelley (1997). In it they asked the questions: how does aging affect creativity? How do creative artists in their 60's, 70's and 80's view their older work and the effects of aging on their art? The sample included 88 graphic artists aged 60 and older, who were nominated as creative by recognized artists and completed an open-ended questionnaire.

The responses to the questionnaire items were grouped into categories. In terms of the quality of their work, the researchers found that all three age groups rated the quality of their work as improving over the decades (no surprise there!). In contrast to the peak theory, these artists rated the work done in their 30's and 40's to be of lower quality than their best work - which occurred in their 50's and 60's. The reasons for the improvement in the quality of their work included new knowledge and skills and changing external circumstances such as retirement (more time for their work). A number of the artists (13%) also mentioned an increased acceptance of themselves and their work - a theme that came up again and again in the results of the study. When asked about the sources of their creativity, the artists reported a reduced concern for other people's criticisms and the fact that they were more self-directed. Health issues were mentioned by over half of the artists, with sensory loss (visual as well as auditory) being the most common. Significantly, most of the artists compensated for their loss of energy or stamina by altering their working habits. The authors of the study also conjectured about what the artists failed to say about their work: most did not mention approaching death or dying, or of needing to complete a "swan song" piece.

The picture that emerged from the discussion of the study was that of a group of working artists in their 60's, 70's and 80's enjoying their lives and opportunities, valuing their past experience and knowledge and living day to day in a fairly unproblematic state of being. The authors noted that in responding to questions about how their work had changed as they grew

older, the artists' responses were remarkable for "...not being very subtle, profound, or grand." They go on to reflect that "Hardly any artists wrote about the challenges of growing old or about feeling the need to make their work more complex or exciting. Little was said about freedom, spontaneity, intuition, or insight. Little, if anything was made of the unconscious, anxiety, or taking life more (or less) seriously. Notably infrequent, too, were statements about the crucial role of critics, the public, the marketplace, or the audience. Similarly rare were allusions to spirituality, becoming more profound, depth, getting to essentials, or wisdom." (p. 148) I've quoted the authors at length because I think that it gets at the differences and preconceptions that researchers may have about their subjects and how their expectations in this study seemed not to be met. The truth may be that older people, artists or not, do not spend a great deal of time philosophizing about their lives or cogitating on the big themes of life (or psychology). The fact that most people's lives turn out to be more prosaic than we would like to believe may say more about the researchers than the subjects!

The final article was from Bradley Fisher, and Diana Specht (1999) and dealt with successful aging and creativity in later life. The authors are with the Gerontology program at Southwest Missouri State University. The study contained closed and open-ended questions in a survey questionnaire and consisted of 45 to 60 minute interviews with elderly people who had taken part in a visual fine arts display for individuals aged 60 and over. Of the 40 artists involved, 36 agreed to participate. The authors stated that they hoped to discover whether creativity has an impact on one's aging experience, and whether creativity provides the individual with skills in coping more effectively with circumstances later in life. They noted that many of the elements that have been identified as crucial for successful aging are also inherent in the creative process as well, such as adaptability, flexibility, willingness to take risks, and problem-solving skills (additional elements in successful aging included a sense of purpose, positive interactions with others, autonomy, self-acceptance, personal growth, and health).

One of the findings was that the artists distinguished between creativity as "making something" and creativity as being the ideas or processes that underlie creative activity, such as thinking about things in a unique way. "For these older artists, creativity involves a link between the internal world of thought and imagination, and the application or realization of those ideas through the process of making something." (Section 4) Essential ingredients for creativity mentioned by the artists were motivation and drive, an attitudinal or philosophical orientation

toward art and life in general, and imagination. (Section 5) The results did uncover a link between creativity and successful aging, especially in terms of the elements listed above. The authors report that the older individuals in their study are not only active, but “have a sense of purpose, accomplishment, and something to look forward to. They do not see their lives as over and their hours to be spent in quiet rumination of past accomplishments. Their lives are still vibrant with the hopes of tomorrow.” (Summary section) The study is sprinkled with extensive quotes from the artists that convey a sense of practicality and coping that is not in the least self-indulging or regretful at having arrived at this stage of their lives. The authors, too, demonstrate an admiration and valuing of their respondents, saying that, “...these older artists are role models of successful aging.” The contrast in tone from the previous study as well as the methodology used again raises the question of the possibility of the “neutral observer” in research.

This literature review, limited though it may be, has given me a lot to think about with respect to creativity, aging, and research. A couple of concluding observations: 1) it is comforting to learn that the peak for creative activity may be more fluid than previously thought; 2) attitude and disposition do play an important part in creativity and aging, at least in the minds of the study participants; 3) creativity as measured in tests that take place in controlled environments can only form a limited part of the overall picture.

What has turned out to be more of interest to me throughout this exercise is the relationship between what one chooses to investigate and how that relates to the results obtained and the meaning that is given to those results. It lends support to the big “C” and small “c” conceptions of creativity to understand that people who choose to study the creative geniuses in the world may have a different perception of creativity than people who choose to design participant or action-based research that looks at “ordinary” people, be they artists, writers, dancers, or other creative individuals. By that I mean that by choosing to study (mainly dead) creative people on the basis of their past accomplishments is a kind of “after the fact” approach to understanding creativity. You already know the outcome; you are just trying to tease out and delineate qualities, experiences, and characteristics that seem to be inherent in already successful people. The kinds of studies that investigate “normal, ordinary” people, by contrast, seek to identify the workings of creativity “in process” as it were: the outcome is not yet known. This has brought me back to the systems theory of Csikszentmihalyi, especially where he says that, “..whether an idea or product is creative or not does not depend on its own qualities, but on the

effect it is able to produce in others who are exposed to it....[c]reativity is not the product of single individuals, but of social systems making judgments about individuals' products." (p. 314). Although I believe that we are all creative in different ways and throughout the lifespan, it appears that only a small fraction of people will actually receive the validation of public consciousness and approval. This may depend less on actual talent than the timeliness, notice, patronage, and luck of the creative person. Who knows how many elderly Shakespeares, Da Vincis, or Newtons there may be, joyfully toiling away unnoticed in the world?

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