Chapter 2
Domain-Generality Versus Domain-Specificity of Creativity

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If Einstein had trained as an artist, would he have been as creative a painter as Van Gogh? How about if Van Gogh had trained as a physicist—would he have been as creative as Einstein? One feels, in answering questions such as these, that the answer is probably “no.” But why? Certainly there are people who are multitalented. William Blake achieved great renown as both a writer and a painter. Leonardo da Vinci showed great talent in painting and invention. Richard Feynman is known primarily as a physicist, but his popular books achieved great renown. Is creativity the same or different across different domains, and why? This essay addresses the question of the domain-generality versus domain-specificity of creativity through a theoretical analysis of the construct. As argued in the following pages, there is no general answer to the question of whether creativity is domain-general or domain-specific; creativity varies across individuals as a function of three variables.

The greatest challenge in understanding the domain-generality versus specificity of creativity is in understanding the concept of a domain itself. Is literature a domain, or German literature, or modern German literature, or modern German literature in its original language, or what? Is cognitive psychology a domain, or psychology, or behavioral science, or social science? Because no consensual definition of a domain currently exists, it is impossible at this time to have a clear sense of exactly what domain-specificity means. Domains may themselves be defined at varying levels of generality or specificity.

First, the basic argument is that creativity is largely an attitude toward life. This attitude can, but does not necessarily, extend across a variety of domains. That is, someone might adopt the mindsets that lead to creative thinking across domains, but they do not necessarily do so. Whether they do so or not is one factor in determining the extent to which creativity is domain-general for a given individual. For example, one such attitude is that creative ideas do not necessarily sell themselves, and hence it often is necessary to sell one’s creative ideas. One might adopt this attitude, say, in one’s work, but not in one’s personal life, or vice versa. Even within one’s
work environment, one might adopt this mindset, say, in one’s interactions with objects but not with people, or vice versa. So domain-generality is a function of the extent to which an individual thinks with a creative mindset across domains. More of these mindsets are described below.

Much of the attitudinal effect is captured through what might be called a legislative style of intellectual inquiry (Sternberg, 1997b; Zhang & Sternberg, 2006). A person with a legislative style is someone who enjoys coming up with new ideas. The ability to generate new ideas does not necessarily go along with a desire to generate such ideas. Someone may be more comfortable thinking in traditional ways, even if he or she has the ability to think nontraditionally. In this case, the issue is not how well one can think creatively but rather how much one desires to think in this way. This desire may be mediated, in part, by socialization. In some societies and some religions, creativity is discouraged. The individual may come to believe that one’s conformity to existing norms is a good test of one’s responsibility as a citizen. Extreme right-wing or extreme left-wing governments, for example—or whatever they may call themselves—may encourage extreme conformity to a societal norm, which may or may not be for the common good. In extreme right-wing societies, such as Nazi Germany, dissenters or people of birth deemed to be unsatisfactory by the government were subject to execution. In the United States, under George Bush the president had the power to detain citizens without due process, a development unprecedented in the history of the country and typically associated with fascist states.

A second variable in determining the extent to which creativity is domain-specific is knowledge. Typically, to think creatively in a domain, one has to know what is known in a domain to go beyond what is known. Someone who is knowledgeable has an advantage at being creative in a domain (Sternberg & Lubart, 1995). But the advantage is tempered by several factors.

First, some domains require very intensive knowledge, whereas other domains require more extensive knowledge. For example, to be creative today in neuroscience, one must be intensively knowledgeable about the workings of the brain and about the research that has been done to date on the brain. The research in this domain is expanding at a rapid rate, so one must constantly be working to keep up to date.

But in many domains, the most creative people are those who are broadly knowledgeable and whose expertise is not limited to one domain (Gardner, 1993). For example, in psychology, many of the most creative scientists have been very broadly trained, often initially studying a discipline other than psychology, as was the case, say, for Helmholtz, Freud, Skinner, Piaget, Beck, Simon, and many others among the most well-known contributors to psychology in the history of the field. Even today, John Gabrieli, one of the best-known contemporary neuroscientists, majored in English as an undergraduate. The advantage that broadly trained people have is that they can bring ideas from one field into another. For example, Simon brought ideas from economics into psychology in his concept of satisficing. George Miller borrowed many of his ideas from linguistics. So being broadly as well as deeply educated enables one to enhance one’s creative thinking. At the same time, it may mean that the individual’s start on contributions to the field is somewhat delayed.

The situation becomes even more complicated, because expertise in a field can impair as well as facilitate creativity (Frensch & Sternberg, 1989). One can become