Chapter 4

Train Yourself to Let Go: The Benefits of Deliberate Practice on Creativity and Its Neural Basis

Oded M. Kleinmintz
University of Haifa, Israel

ABSTRACT

The current chapter explores the benefits of artistic practice, placing an emphasis on its creative benefits. A revised cognitive twofold model of creativity—based on idea generation and idea evaluation—as well as a proposed underpinning neural system are used to shed light on the cognitive and neural processes that occur during artistic training. The process of becoming a professional artist requires an individual to reach a high level of expertise while maintaining an expected degree of creativity. Achieving a high level of expertise requires practice. Practice can lead to automatization—a behavior which, upon superficial analysis, appears to conflict with creativity. However, it is proposed that through deliberate practice of improvisation specifically, one trains oneself to “let-go”, reducing the stringent evaluation of ideas. Deliberate practice in improvisation (reducing inhibition) is shown to have domain-general effects such as increased creativity scores, and changing neural functioning, also in non-artistic domains.

INTRODUCTION

This chapter will discuss theoretical, behavioral and brain research about creativity and artistic achievement in order to shed light on a blooming field that connects artistic behavior and the inner workings of our cognition and brain. Art is an irreplaceable part of our lives. It relates to the conscious expression of sounds, colors, human movement, patterns and other elements, which aim to create a feeling of pleasure or aesthetic appreciation (Bhattacharya & Petsche, 2005). One can both participate in creating art and experiencing art. Most people enjoy the products of the artistic process by listening to music, looking at paintings, going to the theatre, going to a dance performance, reading a book, etc. Art also has a communicative role, and as such, diverse and extensive exposure to art affects our perception of the world and the way we behave in it (Preminger, 2012). There is great diversity of artistic domains including music, dance, literature, theatre, architecture, and visual and fine art. Moreover, there are many styles within
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each artistic domain; the domain of music, for example, has countless different styles such as classical, jazz, rock, metal and folk. Additionally, each domain includes a variety of artistic practitioners such as performers, writers and composers.

A popular theory contends that an artist who specializes in a particular artistic domain must cultivate a skillset related specifically to that domain, also referred to as near transfer (Baer, 1998; Reiter-Palmon et al., 2009). However, there are artistic practices that do not only involve refinement of a specific skill but also require more general cognitions, taking into account the fact that art is referential and representational (Zaidel, et al., 2013). Such practices may enhance behaviors and ways of thinking like communicative skills, focus of attention, and creativity.

Another related claim is that certain artistic behaviors are rooted in general cognitions, and that when a person practices these general cognitions in one context, they are also transferred to other non-specific contexts. This is referred to as a far transfer (Moreno, 2009). These cognitions are suggested to be domain-general, and it is therefore believed that, through practice, artists have the ability to surpass non-artists in their performances of non-artistic tasks. For example, Corrigall et al. (2013) cite several articles that show that musical training is related to improvement in mental rotation tasks. This supports the claim that musical instrumental training has a general effect on spatial cognition. Overall, a multitude of research seems to suggest that the practice of certain specific art skills can also have a beneficial effect on general creative behavior.

Artistic achievement is attained through two general learning paths whose behaviors, cognitions and neural processes seem to conflict with each other. One path is the path of creativity; we commonly perceive the arts as areas of great innovation, versatility, and originality. The second path is the path of practice; in the performing arts, practice is seen as the main means of achieving a required level of expertise. Practice is closely linked to repetition and automatization behaviors which are often regarded as distinctly uncreative. In this chapter, I will attempt to reconcile these two conflicting paths and explore the question of how to reach a high level of creative performance without turning into a “robot” or a machine of repetition. I propose that through practices which enhance creativity, artists can reconcile both the automatizing effects of practicing technical aspects of a certain art form and the demand for a creative output. I also propose that these beneficial practices can be applied to other creative domains by enhancing domain-general cognitions related to creativity.

CREATIVITY AND THE TWOFOLD MODEL OF CREATIVITY

Creativity is commonly defined as the ability to think in new ways and break through the pre-established norms of a referent group in order to create a novel product. However, it is not enough that a product be new; it should also be appropriate and have a certain value that is appreciated by the referent group (Spreitzer & Sonenshein, 2004; Sternberg & Lubart, 1999; Weisberg, 2010). This definition of creativity seems to separate the creative process into two major phases: an idea generation phase and an idea evaluation phase. In the idea generation phase, remote associations are connected and reorganized to produce a creative idea. In the idea evaluation phase, the generated idea is evaluated for its novelty and appropriateness by being assigned a creative value. The distinction between the generation and evaluation phases lies in the basis of several twofold models such as the Geneplore model, which assumes that in the creative process, there is a recursive movement between these two phases that ultimately leads to
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