

# Supporting Creative Acts beyond Dissemination

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## ABSTRACT

In this workshop, we describe and expose the mysterious creative process. We discuss models (both classical and contemporary) of creative practice and experience and their potential application to new media arts and technology. Models that connect the roles of creator and viewer/participant are of particular interest. The goal is to catalyze new ideas and foster creative collaboration across disciplines.

## Author Keywords

Creativity, design, process, theory.

## ACM Classification Keywords

J.m Computer Applications: Miscellaneous. H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

## INTRODUCTION

Processes of developing and experiencing creative works are commonly believed to resist specification and operationalization. While there is general acceptance of formal models for activities such as developing software, conducting research, or making arguments, the creative process is often relegated to the realm of the unexplainable, shrouded in mystery and mysticism.

Yet there is a long tradition of attempts to more formally model artistic and creative processes. Philosophers have developed a number of normative models for artistic creation, from Hegel's characterization of art as a path to self-consciousness [4] to Dewey's representation of art as the sum of our intentions and experiences [2]. Psychologists and social scientists seeking to integrate an understanding of creativity into their various research programs have taken a more descriptive approach. Artists and other creative practitioners have articulated their own models of how they do their work and how they believe their works are experienced. Meanwhile, engineers and builders of tools for creative expression embed implicit models of creativity into the systems they construct.

We wish to survey the landscape of creative process models in order to understand how they might be applied to

the development of new media and technology. Our approach to defining the creative process is intentionally broad, encompassing everything from the actual construction of artifacts or experiences to the phenomenology of engagement with these artifacts or experiences and the understandings that arise through this engagement. By identifying these multiple components of creative processes, we hope to also discover new ways of combining them.

## CREATOR-CENTRIC MODELS

Models that focus on the construction of artifacts or experiences seek to describe a space of possibilities for creators to explore and to prescribe a method for undertaking that exploration. Marcel Duchamp developed a process of taking everyday objects and presenting them as art (a physical instantiation of what cubist painters were doing). He named the outputs of this process *readymades*. His model codified the making of readymades [3], categorizing them based on their physical and conceptual transformations.

Musicians and actors who engage in improvisation have also modeled their creative processes as sets of rules for shaping a dynamic event. Musicians and actors can also use improvisation to create static compositions. The rules of improvisation both present a theory of audience engagement and prescribe how successful improvisers should act so as to prolong that engagement. Though these models are focused on the actions of the creator, they show how there is always a corresponding model of the experiencer, whether it is made explicit or not.

## EXPERIENCER-CENTRIC MODELS

Wassily Kandinsky sought to describe how viewers come to understand meaning in abstract paintings [4]. He posited that the process of understanding occurs along two axes: the lyrical and the dramatic. Along the lyrical axis lie those more familiar aspects of a painting, which provide subject matter that the viewer can "hear" and understand. Along the dramatic axis, on the other hand, lie the aspects of a painting that provide harmonic moments with the viewer, generating "pulsations with all of one's senses." No piece of art, says Kandinsky, can be purely dramatic. The artwork would be incomprehensible. In Kandinsky's model, art is a revelation, where we, as viewers, are told a lyrical story. As the story progresses we are introduced to the dramatic. Ultimately, Kandinsky asserts that all the viewer will be

able to see is the dramatic. The lyrical scaffolding, in a successful piece, will no longer be apparent.

Kandinsky's focus was on the experience of the viewer as a piece of art reveals itself. Mihaly Csikszentmihalyi presents a broader model for understanding how people become captivated and held in various kinds of experiences, from watching a movie, playing a video game, or cooking a meal. Csikszentmihalyi's notion of *flow* describes these experiences as balances of skills and challenges. His model prescribes initiating participant involvement at a low skill and challenge rate, then elevating both levels equally through the life of the experience. Imbalances can cause anxiety (as when challenges outpace skill) or boredom (when skill outpaces challenges).

### **BLURRING DISTINCTIONS**

New media arts and technologies provide opportunities for mixing previous models of creativity to obtain new ones. For example, Autonomous Expressionism [6] combines models from Kandinsky and Csikszentmihalyi. It aligns the lyrical and the dramatic with challenges and skills to produce an autonomous agent for directing performances that estimates the boredom and anxiety levels of the participants and adjusts accordingly.

New media is blurring the distinctions between creator-centric and experiencer-centric models of creativity. From video games in which the construction of virtual artifacts is a fundamental part of gameplay, to the production of media intended for active remix and reuse by others, new media conflate the role of creator and experiencer. This forces us to reconsider models that cleanly separate the two, and to seek out new models in which the "user" of a creative work takes on a generative role, not just an interpretive or interactive one.

### **WORKSHOP OBJECTIVES**

During the course of this workshop we will examine models of creativity in theory and in practice. The primary goal is to foster multidisciplinary communication and

collaboration by discussing tangible models of creative practice and process. The workshop will provide an opportunity to present and discuss:

- Critiques of existing models and ideas for new ones
- Novel combinations of existing models
- Examples (successful or unsuccessful) of application of creative models
- Systems which embed or embody specific models of creativity
- Qualitative studies of creative processes

The focus will be on bridging creative theory and creative practice with practical applications for creative arts and technology, from installations to the tools that support them. Along the way, we hope to develop new theories of creative processes in which participants and creators are one and the same.

### **REFERENCES**

1. Csikszentmihalyi, Mihaly. (1990) *Flow: The psychology of optimal experience*. New York, NY, USA: Harper & Row.
2. Dewey, John. (1934) *Art as Experience*. New York: Minton, Balch, & Company.
3. Duchamp, M., Sanouillet, M., & Peterson, E. (1989). *The writings of Marcel Duchamp*. Da Capo Press.
4. Hegel, Georg Wilhelm Friedrich. (1807). *The Phenomenology of the mind*, chap. VII B.a., 681-785. Harper Torchbooks. Translated by J. B. Baillie.
5. Kandinsky, Wassily. (1926) "Point and line to plane: A contribution to the analysis of pictorial elements." In *Complete Writings on art*, ed Kenneth C. Lindsay and Peter Vergo, first edition, 1994 ed, 528—699. USA: Da Capo Press.
6. Shamma, David A., (2005) *Network Arts: Defining Emotional Interaction in Media Arts and Information Retrieval*, Ph.D. Dissertation. Northwestern University.