

RESEARCH STATEMENT

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My research and scholarly creative endeavors are primarily concerned with understanding and exploring the inherent human factors of graphics and interactive systems. Specific interests include emotion, affect, and other motivational elements that compel people at basic levels of interaction. While process and technology are intertwined aspects of any form of interactive study, I am most interested in the underlying human impulses that a) are influenced by visual elements and b) drive interactive behavior. By exploring these impulses, my goal is to gain a deeper understanding of interaction at more fundamental levels that will assist with the development of new interactive experiences.

Due to my background in computer graphics technology, my work is highly focused on the visual aspects of interactive systems. While I recognize that audio, text, and other elements are important components of interaction, my explorations and interests tend to lean towards visual communication. Regarding application, much of my work involves interactive systems designed for education, training, and instruction. As a teacher of graphic and interactive technologies, this area has naturally extended from my work as an educator and one that builds upon a lifelong interest in learning and instruction.

Early in my career as an interactive media developer I explored graphic interface design for applications such as browser-based websites and various forms of standalone multimedia applications. The initial motivation for this exploration was fairly straightforward and reflected my desire to understand interface design to assist with my development activities. While earning my M.S. in Computer Graphics Technology with the intention of beginning my academic career, I made the decision to direct these investigations towards my scholarly pursuits. In doing so, I immersed myself in related developmental and theoretical areas such as information architecture, usability, and user-centered design.

As the complexity of interactive tools increased over time, I was intent on exploring more sophisticated forms of interaction found in Rich Internet Applications and other forms of media-rich solutions. As more advanced development tools began to allow for greater degrees of creative and interactive freedom, I was compelled to investigate the possibilities of these new and emerging areas. Consequentially, I began investigating the human factors related to the development of various types of interactive educational solutions. Projects I spearheaded or attached myself to during this period were diverse and involved a variety of interactive technologies such as gaming, multi-touch computing, mixed-reality streaming video, and mobile development.

As the digital landscape continued to expand, I became aware of a personal and professional need for a better understanding of art and design theory to support my abilities as a technical developer. This awareness was balanced with a desire to expand my applied skills to include 3D graphics and related interactive systems in order to round out my abilities as an interactive developer. As such, I made the decision to pursue my M.F.A. in Design at The Ohio State University, where I studied and worked at the Advanced Computing Center for Art and Design. There I expanded my expertise in the human element of interaction by focusing my thesis and creative endeavors on the affective qualities of interactive virtual characters. During this time I was able to enhance both my developmental and theoretical background while assisting in the creation of interactive systems using virtual characters as intuitive, naturalistic interfaces.

My future work will continue the progression of my research and my ongoing exploration of human-computer interaction. As technology has evolved to include intricate networks of powerful, media-rich devices capable of new and unprecedented types of interaction, I am eager to discover how the important concepts of human factors and interactive design will translate to this ever-changing digital landscape. Specific questions I wish to explore include:

- 1) How will established concepts of affect and emotional interaction design continue to translate to the world of smaller, powerful, networked devices?
- 2) How will digital interactive character interfaces change to suit the needs of those devices?
- 3) What new design concepts will evolve from applications that are expected to function equally-well on a variety of platforms and interconnected devices such as phones, televisions, notebooks, etc?
- 4) How will gesture-based and other forms of non-traditional interaction grow within the increasingly ubiquitous digital paradigm?