Research Interests **Gerry Derksen**

My masters thesis entitled, "Effect of visual elements on the perception of jurors in computer re-enactments of crime scenes" dealt with the perceptions of viewers, measuring levels of emotional response toward actors within the scene. I consider visual perception central to visual communication design and continue my research in these areas of inquiry. I am particularly interested in user cognition and the role of interactive design in education. What motivates people to continue to interact with electronic devices correlates with the effort it takes to learn. If learning is challenging for people, yet they successfully retain information for long and short durations they are more likely to stay engaged. Translations from perception to cognition are facilitated through design communication and user experience. Part of my research focuses on how design has obscured communication through visualization and to what degree it has aided deeper understanding. What people perceive and how they understand those perceptions is valuable in understanding audience motivations, the influence of self-determination on the design process and retention of information.

I am also interested in the value of interactivity using different physical inputs or haptics. Technology can help early childhood development and learning information through repetition and immediate feedback aiding children to learn more easily. My PhD research investigates the benefits of educational tools in the form of toys, games or activities that could help children with learning disabilities. Much research documents the commercial and educational success of games for able children or, for the severely disabled. However, little work has been done on assistive technologies as Anna-Liisa Salminen concedes in her review of Technology and Disability, "the whole research area becomes more marginalized than it deserves," particularly when it comes to mild cognitive disabilities.

Design theory has focused on users and user behavior for more than a decade with little attention paid to the context in which users operate. I have recently begun to investigate the context through social and cultural norms. If we consider designed object as agents acting within a system that possess affordances embedded into the object, we can open analysis to systems of agents. My interest is focused on computational models that attempt to describe agent behavior (both humans and objects) caused by outside norms within larger complex systems. Along with two colleagues Juan Salamanca and Juan Del La Rosa we established a new framework for a theory we call, "Norm Centered Design". Publication of our first paper on the topic will be presented at the International Conference of the European Academy of Design in Dundee, Scotland 2019.

Finally, have begun to explore the ideas of communication itself and in particular conversations. One of the first skills we learn as human beings is to talk but we really do not master unless trained in the subject to clearly tell compelling stories that communicate to the listener. My research uses boundary objects to bridge conversation between two disciplines that are unlike each other. Using models from George Kelly's Repertory Grid and Issues Based Information Systems (IBIS, Rittel and Kunz) conversation analysis can offer insight to the patterns of every day speech. Studying these patterns and offering some framework for conversations to be more productive between disciplines, particularly those that share similar terms have been fruitful in developing interactive tools.