

The Allusory
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Modes of Design

For my final project I aim to explore how pattern recognition plays an essential role to our visual and spatial perceptive abilities as humans. I intend for the project to be a physical embodiment of the ideas I have gathered through my research process that had to deal with pattern, as it relates to people and their perceptions not just of space, but also of their social experiences. Pattern on all levels (regardless of semantics) deals with the interconnectivity of separate items with common relational elements. I am interested in how we as humans have an innate ability to recognize patterns and restructure them to suit our own perspectives.

I initially conducted tests that explored potential aesthetic, permutation, and perception based qualities of pattern. From these tests, pattern began to take on a more robust form that expanded and informed ideas of perception and highlighted the ability of pattern recognition in people. It showed how internal experiences with colour and shape formed in long term memory could influence how people process and interpret stimuli in objects and images.

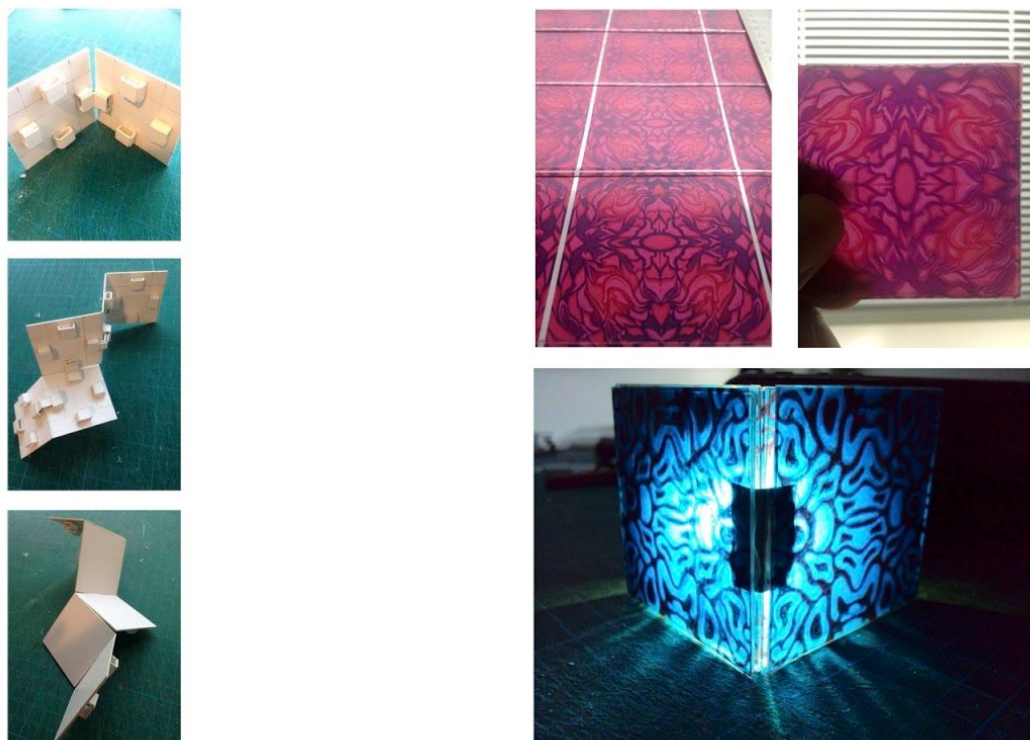


Figure 1. Test models exploring modular capabilities of square motif tiles and how light can activate pattern.



They look like mussels. ❤️
And now I'm hungry! 🤤🤤🤤



These look like
panamanian molas. Google em.

Figure 2. Abstract patterns I designed and the interpretations two different viewers had of the designs. Illustrating how pattern recognition relies on internal experiences in people

Pattern recognition is a skill that is key to how we humans make our way through the world and it's decline in a person is usually a major signifier of mental impairment. As such cognitive assessment tests and tools that utilize themes of pattern recognition have been developed by psychologists to help detect cognitive impairment or stimulate cognition in young children at early development and the elderly at risk of mental deterioration. It is in this space that my project is situated.

Although the word "allusory" is typically used as an adjective to denote things that make indirect or covert references to other things, here I am using it as a noun to denote a tool that could facilitate these sorts of indirect references amongst other uses. The tool will be one

that is interactive, calling for users to actively participate in an experience that they also have the potential to alter as opposed to one they just passively observe.

It will consist of blank square tiles that users can fill with pattern motifs which can then be used to conduct visuospatial tests to determine cognitive abilities or stimulate cognition. The motifs designed by me will be non figurative and abstract in nature, allowing more room for interpretation and allusion. There will also be room for users to create their own custom motifs if they desire. The resulting pattern combinations generated by users' manipulations of the motifs will be reflective of a momentary decision, as each motif manipulation will act as a sort of fingerprint reflecting a user's choice.

To inform the design of this tool I have looked into established cognitive assessment and stimulation exercises in the psychological field that utilize pattern recognition like the Koh's Block Design Test or the Benton Visual Retention test. This modular tool will have qualities that conjure up ideas of the digital and contemporary but it will also be rooted in analog tactility. The actions and emergent effects will be very perceptibly based on users' actions and choices.

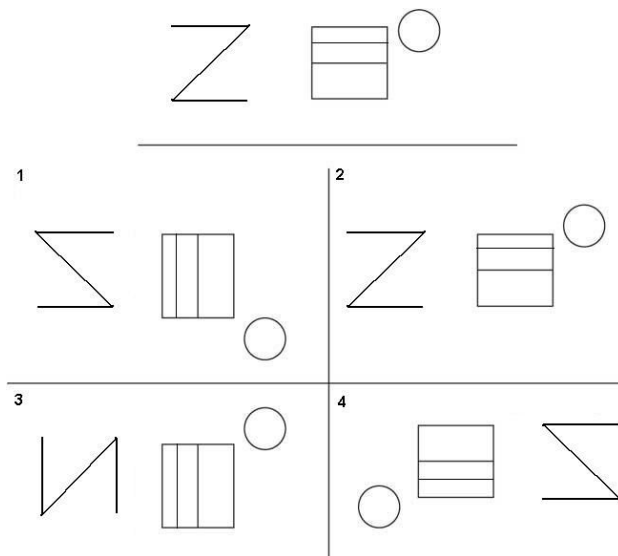


Figure 3. Examples of Koh's Block Design Test (l) and the Benton Visual Retention test (r). Both tests rely on people's ability to recall and match patterns presented to them.

Learning Outcomes

In this project pattern recognition has manifested itself not just as a theme for my project but also in the manner in which research around the subject matter took place. To accomplish the project I had to “tessellate” (consolidate) various “motifs” (tests and references) that I identified with similar themes to form a cohesive “pattern” (project).

The project has helped broaden my understanding of pattern not just on a visual level but as a means of understanding the reliance of human cognition on pattern recognition. In my research it became apparent to me how much sequential learning and memory retrieval (subsets of pattern recognition) are used in the way humans process data.

Researching these topics has also required me to consider the potential needs of the elderly, who are the members of society that are most at risk of losing this vital human ability to recognize patterns. Although my project was already bordering on the fringes of the psychological field this new understanding required me to expand the scope of my project to look into aspects of psychology I hadn’t expected like cognitive assessment and stimulation exercises.

In doing this I was able to situate my project in a space that already had a myriad of established methods and theories that I could engage with. It was through these avenues I began seeing the value of organized play as a tool for mental stimulation. This made me begin to think of my project in a different capacity, that could encourage engagement and spur interaction with its target audience.

I found that in the process of my work it began to become important to me that the project be one that left room for users’ expression as opposed to being something monolithic or single use. In doing this I started to see my role as a designer more as a person facilitating potentially unexpected processes as opposed to a singular authored experience. It is an approach that I would like to explore more in appropriate future projects.

Although I have consulted with research articles and a number of references to bolster my approach on the subject matter of my project, I would like to be able to work alongside a professional in the psychological field for further future development. I would also like to explore other “market ready” production processes and materials in future prototypes of the project.

Through this project I have learned just how vital pattern recognition as a cognitive process plays a big part in our survival and how we perceive the world around us. This is because it relies on our ability to corroborate stimuli we receive in our short term memory with content we recall from our long term memory like colours, shapes and sounds.

Prior to my experience with this project I hadn’t really thought of design as it related to the study of the mind but now I see various potentials for further development and exploration between the fields of design and psychology that revolve around memory, cognition and perception that can be explored through tactile physical objects or virtual digital tools.