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*Developing Perspective*

Cyanotype with ink prints/ Plastic with film

For my pieces, I wanted to explore reconstructing conventional ideas of fashion. I used the essential question, “If you were to be completely isolated, without any external influence, and you were asked to draw a shirt, what would it look like?” as a guide for my project. Taking the more creative approach, I choosing to believe that by turning away from conventional thinking, we would allow ourselves the chance to grow our ideas. I created two fashion garments using this driving question of how to reimagine fashion without being influenced by pre-existing trends and ideas. Because I cannot remove my prior knowledge of fashion, I conducted my experiments by removing other variables. Photography felt like the perfect theme to use because it represents me and shares a greater message on perspectives. My first piece is a skirt and top I made fully out of unconventional materials. The main aspect of my outfit was the film that I would use to make it, so I gathered all of the negatives I had saved. Using my own film made the outfit more special because my friends and I were able to see memories from our semester here at Oxbow being put onto the outfit. I used the mannequin to create my own pattern for both the skirt and top. I then cut the base out of plastic and taped the negatives onto it. For my second outfit, I created a skirt and top out of cyanotype fabric. I laid out the cyanotype fabric and used my negatives to print onto the fabric, leaving an outline of the film. The prints were a bit more faded than I was expecting, so I decided to ink my film and add additional prints on top of the cyanotype. While my fabric was drying I created a series of fashion sketches to come up with an idea for my final design. For this design, I also drafted my own pattern for my designs. Once both pieces were complete, my suitemate and I got out a seamless backdrop and photographed each. Despite the many phases of trial and error that I had to go through to complete this project, I think the end product was successful in sharing my message.

# Internal Beliefs: Developing Our Own Beliefs in the Brain



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*Writer's Note: In this paper, I explore three interconnected topics. I will begin with beliefs focusing on how opinionated belief-related statements stimulate different parts of our brain. Second, I will look at the topic of influence focusing on how we generate our beliefs and how brain development affects our thinking. Finally, I will address fashion through the topic of how trends and advertisements can sway our thinking and restrict our creativity. Using the information gained from these three topics, I will conduct my own fashion experiments. Documenting my creative process for each piece I make, I will be able to share a look into my thought process and how I have applied my research to my creations.*

## **I. Belief in the Brain**

I chose to study the functions of the brain that impact and are impacted by our beliefs. While I know there are many factors that influence what we choose to believe, I am interested in focusing on internal influences. Using the guiding question, "Without external influence, would we have the same beliefs?" I attempt to find out how much our beliefs are actually our own. I am curious to look at the brain because it is the only factor that influences our beliefs that is not external. The National Academy of Sciences of the United States of America conducted a study titled *Cognitive and Neural Foundation of our Religious Beliefs* in 2009 where scientists looked at how spoken religious statements stimulated the brains of a group of both religious practicing and non-practicing people. They tested using three functions: God's level of Involvement using statements like "God is removed from the world" or "Life has no higher purpose", God's level of Anger using statements such as "God is forgiving" or "God is wrathful", and Hypothesized

doctrine and continuum of religious knowledge using statements like "God is ever-present" or "A source of creation exists". Using a group of 40 people, half religious and half not, the researchers

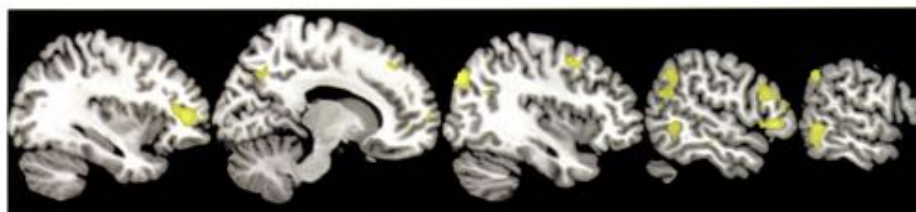


Fig. 1. Effect of God's lack of involvement (D1). Threshold was set to  $P < 0.05$ , false discovery rate (FDR) corrected. Slices are oriented from L to R. Activations are shown in yellow.

watched how each person's brain reacted to positive and negative statements relating to the three functions. The first function, God's level of

Involvement, triggered the Theory of Mind processes, the part of the brain used for understanding, which helped the participants to understand God's intent and resolve any negative emotions triggered in believers when a lack of involvement was suggested.<sup>1</sup> The second function, God's perceived emotions, also triggered the theory of mind and higher-order emotional regulation. This means that believers may have felt negative emotions such as fear or guilt when hearing statements about God's anger that contradicted their prior understanding.<sup>2</sup> In the final function, the Continuum of Religious Knowledge, participants reacted based on the imagery content available, so the stimulated areas

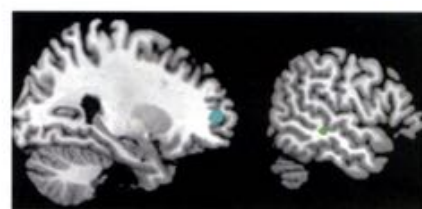


Fig. 2. Effect of God's perceived emotion (D2): Love (Left) vs. Anger (Right). Threshold was set to  $P < 0.05$ , FDR corrected. Activations are shown in blue for God's perceived love and green for God's perceived anger.

varied based on the amount of available prior knowledge each participant had.<sup>3</sup> Overall, the findings



Fig. 3. Effect of religious knowledge (D3): Experiential (Above) vs. Doctrinal (Below). Threshold was set to  $P < 0.05$ , FDR corrected. Slices are oriented from L to R. Activations are shown in purple for doctrinal knowledge and as a spectrum for experiential knowledge.

30  
1/34/35/9

<sup>3</sup> Doctrine) R ITG, BA 22/39/38/36/37, L superior temporal gyrus  
Experimental) Bilateral occipital lobes, L precentral gyrus, L ITG, BA 36/40-43/28

for the effect of religiosity on the processing of religious stimuli were related to strong episodic memory and imagery retrieval which is that part of your brain where long-term memories are held typically regarding past experiences. They also found that actively practicing participants tried harder to find and represent the meaning of the statements.<sup>4</sup> The findings related to the process of adopting or rejecting

religious beliefs and relation to religiosity were that anti-religious statements said to religious participants engaged key areas for

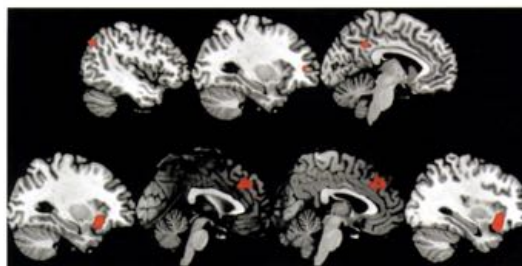


Fig. 4. Effect of religiosity (Above) and disagreement (Below). The effect of religiosity in the parametric design is shown above. The effect of disagreement (compared to agreement) for religious (compared to nonreligious) participants in the nonparametric design is shown below. Threshold was set to  $P < 0.05$ , FDR corrected. Slices are oriented from L to R. Activations are shown in red.

emotional cognitive integration and negative emotions such as aversion, guilt, or fear of loss. Because stakes for detecting and rejecting were higher in this group, they found higher cognitive conflict which is a state of cognitive dissonance that happens when someone is presented with information that contradicts their prior beliefs or ideas.<sup>5</sup> While the main focus of these studies was religion, they were still able to show how strong beliefs impact our thinking. Non-practicing participants showed less overall stimulation to both positive and negative statements. However, practicing participants used many different functions such as understanding, imagery retrieval, emotional regulation, etc. to process and react to each statement appropriately. I found it interesting that many of the participants experienced high cognitive conflict, meaning they struggled to accept the information given to them because it went against their prior understanding. It can be hard to accept that there are other opinions that are not your own, so seeing how people cope with being told they are wrong or hearing an

<sup>4</sup> L Precuneus, L MFG, and L Occipital middle Gyrus

<sup>5</sup> L MFG, Middle gyrus → L occipital, Bilateral anterior insulae, middle cingulate gyri

opinion that differs from their own is very interesting to understand how we attach to our beliefs. This makes me think that it may be harder than I imagined to change someone's beliefs solely on external information because each person seems strongly attached to what they believe and not interested in changing their opinion.

After reading this study, I searched for a source that could explain what each part of that brain was, because the previous study referenced parts of the brain I was not familiar with. I came across two very useful sources, the first being *The Multifaceted Abstract Brain* written by Rutvik H. Desai, Megan Reilly, and Wessel van Dam. Abstract concepts such as morality judgment and theory of mind are almost entirely responsible for our internal beliefs. Theory of Mind was mentioned many times when discussing the effects of religious statements on the brain and “is traditionally defined as the process of inferring the beliefs, thoughts or feelings of another person, especially when those beliefs differ from one’s own beliefs” (*The Multifaceted Abstract Brain* 10). Often relying on social cognition and emotional perception, I can see how the Theory of Mind would play a part in how we respond to our beliefs. In this study, the usage of verbal stimuli was able to show that “the areas seen in the domain of [Theory of Mind] have a great deal of overlap with the areas in the moral reasoning meta-analysis” (*The Multifaceted Abstract Brain* 10). In simpler terms, when given morality-based statements and belief-based scenarios, the brain reacted similarly and in similar areas. This brings us back to the second abstract concept related to belief, Morality judgment. Defined as “a set of guiding principles that includes standards of right and wrong conduct, or rules that guide us in our everyday choices and actions” (*The Multifaceted Abstract Brain* 10), morality helps us to justify what we believe. Morality and Theory of Mind both come from and trigger the same parts of the brain when

stimulated. From this information, I can conclude that our internal beliefs are heavily formed through our understanding of the world and our knowledge of what is right and wrong. Knowing this, I return to my guiding questions, which I am still not sure I will be able to answer fully. Although I can't be positive about what amount of our beliefs are our own, I am able to say that most of what we believe comes from our own experiences. We use prior knowledge of ethics and first-hand experiences from our own lives as proof of what we believe.

## II. Brain Development

Brain development has a large impact on how we think and what we believe. It is common thought that children are more gullible than adults because they are more susceptible to believing what they are told. The study, *Revisiting the Fantasy–Reality Distinction: Children as Naïve Skepti* by Jacqueline D. Woolley and Maliki E. Ghossainy, addresses this idea and provides a more accurate way of viewing the growing mind. Children lack the proper signal detection to decide what is real or not real, so this makes it hard for them to differentiate imagination from reality. We can sort their judgment into 4 categories: (view in Table 1) Hit, Miss, False Alarm, and Correct Rejection. Where “Hit” means that they are correct in thinking something is real, “Miss” means they are incorrect in thinking something is real, “False Alarm” shows that they believe something is real when it is not, and “Correct Rejection” means that they are correct in believing something isn't real.

Table 1  
*Patterns of Correct and Incorrect Judgments Regarding Reality Status*

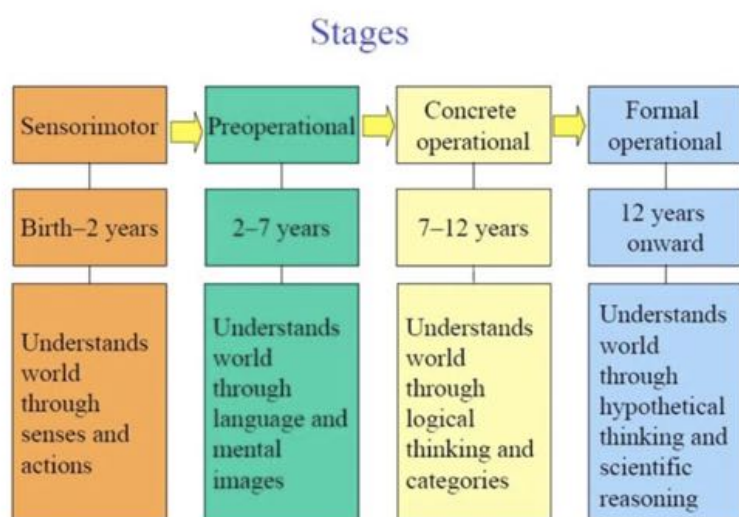
Judgment	Reality status	
	Real	Not real
Real	HIT (e.g., knowing that dinosaurs are real)	FALSE ALARM (e.g., believing in Santa Claus)
Not real	MISS (rejecting the reality status of real entities and events—the focus of this article)	CORRECT REJECTION (e.g., doubting the existence of dancing carrots)

Variables such as age, evidence provided, and testimony greatly affect children's decisions regarding what they believe.

These external factors, like trusted parents telling a child Santa is real, challenge the brain to differentiate between fantasy and reality. As a child ages, they are able to make this choice easier and easier following the development of their signal detection. Unlike the religious practicing adults in the previous study who struggled to accept opinions other than their own, children form and reform opinions easily. As children grow and gain new comprehension skills, they are able to question themselves and discover new ideas that may change their prior understanding.

Psychologist Jean Piaget studied the cognitive development of children and came to the conclusion that there were 4 stages in the development process. The first is Sensorimotor, which occurs from birth to 2 years old. This is the stage where children learn through their senses and begin to understand that things can still exist even when they are not directly in sight.

Preoperational is the second stage and takes place from ages 2 to 7. In this stage, children learn to use symbols to represent things; children will likely begin imaginary play at this stage. Next is Concrete Operational, from ages 7 to 11, children will begin to use logical rules to understand



more complex ideas. An example would be that a child could understand that when pouring water from one glass to another, while its shape may change, its properties will not. Finally, from ages 12 to adulthood, there is the Formal Operational stage. In this

stage, children learn to apply logic to abstract and hypothetical ideas. Knowing these stages, we



can understand how some children are more susceptible to certain beliefs based on the stage of development they are in. Beliefs formed earlier in life can be challenged and built on as each stage of development takes place.

### **III. Influence in Fashion**

As our brains develop, we gain the ability to think in multiple ways. As Daniel Kahneman puts it in *Thinking, Fast and Slow*, our brain has different systems for different purposes. System 1, fast, is intuitive, while System 2, slow, is used for problem-solving and completing equations. Our brain commonly takes mental shortcuts, heuristics, to make thinking easier and save time and energy. These heuristics use prior knowledge and experiences to make decisions which often leads to bias. When we use system 2 we are choosing to be skeptical and ask questions before acting, but when using system 1 we are choosing to believe the biases. There are many different types of cognitive bias but the one that relates to the topic we are discussing is priming which uses stimuli to draw your attention. This can most commonly be seen in ads where emotional positivity is used to appeal to your theory of mind. When it comes to fashion, influence can come in the form of trends and advertising. Brands like Nike use slogans like “Just do it” and encourage stories of successful athletes as inspiration and bait for viewers. As the internet becomes more and more present in our lives, we will find these ads increasingly harder to avoid. We will also find it even harder to stay away from trends, because they are hot topics in big fashion magazines like *Vogue* and with creative fan bases we may be a part of. Fashion influencers on TikTok collaborate and share similar brand deals where they are paid to dress in similar styles. Although trends are not always marketing schemes, they are subconsciously affecting our ability to dress on our own. I recently listened to a podcast on trend forecasting

titled *Articles of Interest: American Ivy* which discussed the origin of trends, and how large corporations like WGSN (Worth Global Styling Network) create and predict trends years in advance. Smaller brands can pay for trend forecasters to help when buying and designing inventory in order to maximize sales. This leaves me wondering, what would a world without influence look like? If everything we buy has been meticulously planned and designed specifically to fit trends and with only profit in mind. How would we coexist without trends?

Even though fashion trends are everywhere, not everyone has conformed to them. Many of the most fashionable people I can think of dress for themselves and not to fit in. One interesting example of someone who has challenged herself to steer away from trends is Andrea



Zittel. In 1991, she began her “Personal Uniform” series where she set parameters for herself for what she can wear each season in order to push her creativity. Her first parameter is, “The creation of rules is more creative than the destruction of them. Creation demands a higher level of reasoning and draws connections between cause and effect. The best rules are never stable or

permanent but evolve naturally according to content or need” (Zittel, *These Things I Know for Sure*). To me, she is trying to say that while you can set guidelines for yourself, they do not have to be totally restricting. You should be free to edit and make exceptions for yourself when needed. Her second parameter is that “What makes us feel liberated is not total freedom but rather living in a set of limitations that we have created and prescribed for ourselves”(Zittel, *These Things I Know for Sure*). I think ~~by this~~ she means to say that we are able to push our creativity and challenge our thinking by setting guidelines for ourselves. When you limit yourself, your brain is forced to explore new ideas it may never have considered before. Her third and final parameter is, “Things that we think are liberating can ultimately become restrictive, and things that we initially think are controlling can sometimes give us a sense of comfort and security” (Zittel, *These Things I Know for Sure*). This final thought is the most challenging for me to translate. I think that she means to say that the more we restrict ourselves, the more we expand our creative thinking. Zittel, for example, continues to re-wear the same items of clothing for full seasons but continues to alter how she uses them for her wardrobe to stay exciting. By limiting her access to new clothing, she forced herself to be creative when reconfiguring the items she already had. Turning away from trends and the consumerist ideas around seasonal wardrobes, Zittel challenges herself to be creative and continue to look fashionable throughout the year.

#### **IV. Project Documentation**

Similar to Zittel, I want to explore the idea of reconstructing common ideas of fashion. “If you were to be completely isolated, without any external influence, and you were asked to draw a shirt, what would it look like?” This guiding question is the root of my project because it's

impossible to ever know how we would think without external influence. I am taking a more creative approach to my answer by choosing to believe that without a need for belonging, we would become more creative. When we are not constricted by the idea of fitting in, we are able to explore so many new ways for thinking and creating. Also, by turning away from conventional thinking, we allow ourselves the chance to grow our own ideas. I am creating two fashion garments using this driving question of how to reimagine fashion without being influenced by pre-existing trends and ideas. Because I cannot remove my prior knowledge of fashion, I will conduct my experiments by removing other variables. I hope that by taking out the conventional pieces of clothing, I will be able to explore deeper into how we think when approaching new ideas. I chose to create both pieces with the theme of photography tying them together. Photography feels like the perfect theme to use because it both represents me and shares a greater message of how we see the world. When we take photos we capture moments through our own eyes and allow people to see a glimpse into our perspectives. Angles, filters, subjects, and even camera types are just a few ways photographers create their unique style. For this project, I imagined that developing a style of photographing could be similar to developing your own opinions.

For my first piece, I created a dress fully out of unconventional materials in hopes of challenging myself to create something out of the ordinary. My process was very much trial and error. After drawing my sketch, I took measurements and planned out how each element of the design would come to life. The main aspect of my outfit was the film that I would use to make it, so I collected all of the negatives I had saved from the past few years. Using my own film made the skirt and top more special because my friends and I were able to see memories from our



semester here at Oxbow being put onto the outfit. My first approach was to use small metal jewelry-making rings to clasp the pieces of film together, but I wasn't able to achieve the volume I wanted. The next attempt was a bit more successful because I created a wire hoop skirt to place the film on, but in the end, I had to start over again. For my final attempt, I used the wire hoop skirt I had made to create a pattern for the skirt by draping plastic wrap over it. I then used my pattern to create a base for the skirt again out of plastic wrap. I then laid out the skirt and taped the negatives onto the base one by one. I used a similar process for the top by draping on the mannequin and creating a pattern for the top. I then made the top out of the same plastic wrap as the skirt and taped the negatives on one by one.

For my second outfit, I created a skirt and top out of cyanotype fabric. I laid out the



cyanotype fabric in the sun and used some of my negatives to print onto the fabric, leaving an outline of film printed onto the fabric. Unfortunately, the prints were a bit more faded than I was expecting, so I decided to ink my negatives and add additional prints on top of the cyanotype. While my fabric was

drying I created a series of fashion sketches to come up with an idea for my final design. In the end, I decided on a drop waist maxi skirt and a fitted bustier top with a ruffle at the bottom. I used the mannequin to drape on and draft a pattern. Once I had created my pattern, I cut out each piece from my cyanotype and began sewing. After a bit of adjustment and fixing any errors I may have made, I completed both the top and



skirt, and I was left with the task of how I would close each piece. I opted to use ribbon for both pieces and sewed button holes to use as sort of a make-shift lace-up closure.



## V. Conclusion

Overall, I looked at how we could possibly answer the question of what we would be like without influence. While there is no way of knowing for sure how we would think or choose to dress, we can look at how we develop our own opinions as a way of seeing how much we are affected by others. Children are our best chance of understanding how our beliefs come to be because they are in the stages of transitioning from believing everything they are told to beginning to question and look for answers themselves. Similar to how we are influenced to believe things, people are often influenced to dress a certain way based on what they see others wearing. The need to fit in is something many people struggle with which is essentially just the inability to create your own ideas because there is too much influence. As an artist I struggle

with this; I find myself leaning too much into my inspiration and losing my own ideas to the ones I see around me. My project looked at how fashion can be used to counteract this issue. I looked at how people like Andrea Zittel have created controlled environments for themselves to create without influence. By creating rules and removing the conventional material, the brain is forced to think outside of its comfort zone. The two pieces that I made were meant to challenge my creative thinking and push me to make art in a new way.

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