As is clear in my thesis, a consistent underlying problem with modernism is that of style. Just as International style was caught in the cycle of the white "machine aesthetic," Brutalism was inextricably linked with concrete. But to mark up aesthetics as the problem and rid yourself of a consistent, cohesive style altogether is missing the point. Brutalist graphic design proves that an inconsistent style does not make something non-superficial. To say that aesthetics are solely cultural signifiers, to say that they have no functional basis rids them of their purpose. On the other end of the spectrum, to say that they are derived from pure functionalism is also faulty. As Curtis echoes, "*For even those few architects of the 1920s who saw themselves as pursuing a purely functional architecture were still stuck with the fact that functions do not, on their own, generate forms. Even the most tightly defined set of requirements may be answered in a variety of ways, and a priori images concerning the eventual appearance of the building will enter the design process at some point. Thus functions could only be translated into the forms and spaces of architecture through the screen of a style, and in this case it was a style of symbolic forms which referred, among other things, to the notion of functionality*" (181). The architects/designers role, then, is to navigate between the two, working inside a set of constraints while having the agency to respond to cultural conditions the way they see fit. Too often today is the designer separated from any functional constraints, UX designers working in Figma while frontend software engineers do their best to replicate the aesthetic. This very detachment is what separates the designer from the full potential. It is a multifaceted designer that can combine an understanding of the cultural, functional, and aesthetic pieces into a cohesive whole. Understanding all these topics together gives a better understanding of the big picture. While my traditional technical skills may be less developed, the liberal arts education will take me further in my comprehensive approach to design.

The standard liberal arts at Whitman, however, doesn't yet fully provide this holistic education. Only through an IPM was I able to combine these disparate topics into a unified whole. Architecture and visual culture, new media, and computer science are far more connected than at first glance, as I will demonstrate through my portfolio. Some of the connections are inherent to these fields. Others are the result of my interests and the manual application of ideas from one discipline to another. Much of Academia is about dialogue, proving, disproving, and critiquing. While this dialogue is necessary, I feel uneasy critiquing the ideas of others when I can't provide better ones myself, or at least provide alternatives. My biggest frustration was that by the end of many of my studies, there was no conclusion, no solution, no attempt at considering other possibilities. This fosters a kind of idle cynicism. The international style has classist, sexist, and racist undertones, should that mean that we avoid all association with it, or should we improve on it? It proved very difficult to write a thesis in this way, as either academia itself or my own education doesn't lend itself well to this type of writing. In the end, I am steadfast in my belief that it is better to be ambitious and fail than to do nothing at all. It is better to be provocative and risk offending people than to fearfully avoid it. Every failure is a valuable lesson. Failed experiments produce greater insights than successes ever could. Architecture and user interfaces are the best arenas for this type of thinking since it combines both functionality and visual culture. It is often possible to ignore art on a daily basis, but you cannot avoid the everyday impacts of these physical and digital spaces. And, a manifesto such as this was the natural medium for this slightly contentious attitude.

In the spirit of this broad perspective, I put forward the concept of pattern. Culture works in patterns. If one person displays certain behaviors or inclinations, it is mere chance or coincidence. If it happens many times repeatedly, it is indicative of a greater phenomenon. It is the naive positivity of baby boomers that

lead to the apathy of gen x embodied by Nirvana. There will always be a rebel trying to stick it to the man. There will always be an avante garde movement subverting the previous one. This is what many modernists mean by zeitgeist or 'spirit of the times.' In both the International style and Brutalism many have identified that style has limited the movements, limiting their capabilities. It is because many architects blindly followed, mimicking the style of the greats assuming their buildings would communicate the same ideals. Not all patterns are good. Sometimes the value of a pattern lies in the recognition of it and its active disruption. The problem was not that they incorrectly implemented the style, it was that they weren't doing anything new, not offending, they were not contributing a variety of perspectives. With technical problems, it makes sense to use a "don't reinvent the wheel" attitude, but with creative problems, we should be diversifying our approaches. If many were to contribute their own attempt at a single goal, not only would the quality of our solutions improve, but it is the consistencies that emerge between these separate approaches that truly represent the zeitgeist. This big-picture thinking has led to dangerous sentiments like determinism and universalism because the responsibility is placed on an individual rather than a collective. It isn't the ambition of modernism that should be removed, it is the hubris that one approach can fulfill everyone's needs. But architects are often blamed disproportionately for thinking on a grand scale. Nobody faults the data scientist for synthesizing conclusions from the data they collect. It is because architecture is a tangible and functional art form that people feel so directly affected by it.

A static pattern creates a sense of the infinite. When randomized, it becomes texture. A pattern repeated over time is a sequence. When randomized over time, it becomes spontaneous and lifelike. They can be used to show a progression, a movement, or a change depending on the context. A pattern can make something recognizably the same while no one thing is repeated. Most importantly, patterns can be learned. Patterns can be more than visual though. They can be the rules themselves, an order of operations. Fluid design systems. Breaking the pattern of mimicking style, instead deriving a pattern from a series of radical experimentation, is moving towards a more thoughtful process. The hubristic ambition of universalism was imposed on time and place. A fluid visual system based on values would be neither tied to time nor place. If we were to let form follow values, this problem would be eliminated. It would be a resonator of cultural conditions; like Brutalism was meant to be. Releasing architectural movements from a concrete (no pun intended) style would also force users to think more critically, recognizing patterns in more abstract concepts than just visuality.

Technology is the perfect tool for this endeavor. Technology is not fascinating in and of itself. It is not our savior, it is not the solution to all our problems. It is how we use it, interact with it, both directly and indirectly, that gives it purpose. Software and the web comprise the main forms of media in our current society, and I felt that to use and understand its underlying mechanisms, I needed to know the foundations of computer science. Coding allows the highest degree of freedom, far more than most design tools, you are only limited by your own imagination and understanding of how to implement it. Coding lends itself extremely well to endless repetition and experimentation. It could be used to experiment with color like Albers, to experiment with forms, to experiment with representation and abstraction. Above all, it allows for the patterns to be viewed on a massive scale, because it's not until you see the pattern at the macro level do you truly start to understand the rules that govern it. In order to understand visual design systems, I needed new media classes. But to understand how to use them and when to use them, Art History and

Visual culture studies were crucial. Having the critical understanding, and the tools to act upon it, is the unrealized potential of the liberal arts.