

Chapter 24

Conclusion: The Code We Learn With

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ABSTRACT

This concluding chapter serves as provocation for thinking about niche online communities as not solely constituted with human actors. It examines the question of how digital code participates with and subtly shapes niche online communities. Learning online is not only a matter of interaction between humans; it also participates with and shapes the code that learns and constructs the conditions in which one learns. Digital code delivers and dictates the content we see and learns from how an individual interacts with others. It is far from egalitarian with content as it amplifies patterns and popularity, which results in homogenous experiences and thinking for users. As a result, educators, designers of online learning environments, and researchers need to take into account the role that digital code plays in the interface it creates in teaching and learning online.

INTRODUCTION

The qualities of contemporary human communication have shifted dramatically in large part due to digital technologies. Social media is changing how we relate to one another. These changes are not in kind, but rather defined by the qualities such as speed, amplification, and the spatial nature of interaction. There is an assumption that how we

communicate through social media is like any other way of interaction mediated either through text, image, or sound. However, there are unseen dynamics, controls, and forces underlying how one comes to know about another through social media. The digital interfaces, algorithms, and hardware are not static shapeless forms. Code learns human activity online and adapts. When an individual goes online she is participating with and teaching a system, which in turn shapes how she interacts, knows, and learns from others online. The purpose of this chapter is to call attention

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to this feature of online interaction and call for educators, researchers, and designers of online learning environments to consider carefully the role that digital code plays in learning.

Human interaction is mediated through gesture, language, image, and text. Digital mediation is no different. When we write a message to someone, post an image, or share a link through social media we are communicating. The nature of this communication is qualitatively different than more traditional forms of media communication (e.g., writing someone a letter on paper and mailing it to them). The speed in which we can communicate is now near instantaneous. We can communicate with untold numbers of individuals. Human communication is now asynchronous and ubiquitous in terms of access, interpretation, and production. These qualities are shifting the way we know and learn from others online.

When an individual goes online she learns from looking at content. Whether she scrolls through her Facebook Timeline or Twitter Feed she is presented with information from those she has chosen to follow and those that social media wishes to present to us (e.g., advertisements or promoted messages). In a recent study of the use of social media in the art classroom (Castro, 2012), participants attributed their learning as most directly impacted by the activity of looking, studying, commenting, and 'liking' digital artifacts such as images, texts, and videos. Specifically, they reported that having the capability to study the artworks of their peers' anywhere and at anytime as a significant difference than in more synchronous learning environments. The digital interface of the social media platform used in this study played a critical role in delivering the images that participants were viewing and raised important questions in how that information was delivered to and interpreted by participants. Social learning is long known to be a critical feature of any learning environment and it is no different through social media. It is an assumption though that the algorithmic backbone of social media and

search delivers information that is unbiased and equivalent to others' experience of the same social media interface. Algorithms and the building blocks of code create the conditions of interaction and interface and these conditions are not universal and are not unbiased. They play a significant role in experience online.

The Agency of Code

We think through and with the world around us. How one organizes and shapes her environment reflects and also shapes her thinking (Hutchins, 2001). The chair one sits in, how one organizes her desk, and the rooms she lives and works in mirror and influence her thinking. Artists' studios are as distinct as the work they produce. The tools and instruments used in scientific laboratories influence results. Even the rules and customs of language shape cognition. As McLuhan (1962) wrote over 50 years ago, the mediation of communication shapes the message. The form of media and its role in communication shapes the meaning and interpretation of the message. Media is not just some shapeless form waiting for a message; it plays an important role in the production of messages and meanings constructed.

The more-than-human world (Abram, 1996) has agency and influence on individuals' everyday lives. Climate change is having and will continue to change the way we live. The human body, home to more bacterial matter than human cells, are interwoven into complex ecologies that scientists are only beginning to understand (Humphries, 2009). This includes the cultural and technological artifacts that humans have constructed and that they participate with and through. Social interactions are networks of relations between humans and the technologies, messages, and media produced (Latour, 2005). While some might consider the inanimate world inconsequential in social interaction, it plays a significant role. Material culture (Bolin & Blandy, 2003) creates the conditions of social interaction. These conditions are a kind

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