

## Chapter 3

# Toward an Algorithmic Rhetoric

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### ABSTRACT

*Insofar as algorithms are digital problem-solving operations that follow a set of rules or processes to arrive at a result, they are constrained by the rules that determine their parameters for operating. While an algorithm can only operate according to its instructions, however, the potential rules that might govern an algorithm are inexhaustible. An algorithm's design thus makes rhetorical choices that privilege the importance of some information or desired outcomes over others. This chapter argues for a way of thinking about algorithmic rhetoric as macro-, meso-, and micro-rhetorical. Along these lines, it would be beneficial to think more about algorithms as digital rhetorics with terrific power to sway what counts as knowledge, truth, and material reality in the everyday lives of people across an astonishing range of global communities in the twenty-first century.*

### THE QUINTESSENTIAL DIGITAL RHETORIC

Suppose that, as I was typing this sentence, I'd misspelled the word "misspelled." It wouldn't much have mattered. No sooner would the wrong letters have materialized on my laptop's screen than they would have morphed at once into the accepted, proper spelling. This phenomenon is called auto-correction, and it's a common feature now of most all word processing software, from

text messaging on a cell phone to plonking keys on a computer. Auto-correction—which fixes common spelling or grammatical errors when you type—and auto-completion—a related function that predicts the word or phrase you're typing so to spare you the Herculean labor of having to type the rest yourself—are now commonplace on virtually all digital interfaces, whether conducting a web search, writing an email, or editing source code. These technologies are powered by algorithms: those often hidden sets of instructions that intervene in organizing our world in astonishing ways.

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As algorithms go, Autocorrect and Auto-complete are relatively benign operations. They offer a modern convenience, albeit with some corresponding complications that might best be described as *communicative*. Under the sway of auto-completion, for instance, a text message might say, “Boil the pirates,” when what it really means is, “Boil the potatoes.” This can make for some funny exchanges, typically but not always harmless. In a widely reported incident in early 2012, the Hall County, Georgia police department placed West Hall schools on lockdown for two hours because someone had received a text message saying, “gunman be at west hall today.” The sender had tried to type “gunna” as shorthand for “I’m going to,” only for Autocorrect to change the word to one it found more appropriate (Gleick, 2012). While algorithms make possible innumerable minute operations that dapple our daily lives in ways we may not notice or regard as especially consequential, they nevertheless do often have stakes with real repercussions for what matters in how people come to understand, communicate, and negotiate the complex realities of our global communities today.

Indeed, in the twenty-first century, algorithms have become an outright pervasive force in our social world. From stoplights to stock tickers, sporting events to search engines, algorithms now are everywhere. Yet, scholars of communication, and of rhetoric in particular, have largely neglected to give the algorithm the attention it deserves. This neglect can certainly not be justified on the grounds that algorithms are neither communicative nor rhetorical. These digital problem-solving operations, which follow a set of rules and automated processes to arrive at a result, can reasonably be called the quintessential manifestation of digital rhetoric in the world today. How that might be so, and what to do about it, are the general inquiries guiding this chapter.

The closest precedent in the scholarly record for thinking about algorithms as rhetorical comes from Ian Bogost’s (2007) work on what he calls

the “procedural rhetoric” of video games. “Procedural rhetoric,” Bogost says, “is the practice of persuading through processes in general and computational processes in particular” (p. 3). Procedurality, for Bogost, refers to the fundamental way software works: through the encoding of rules designed to execute processes that, when followed, represent the world in a particular way. He regards such procedurality as “the principle value of the computer, which creates meaning through the interaction of algorithms” (p. 4). Bogost is interested in the manifestations and consequences of procedural rhetoric in video games, and not in algorithms *per se*. But his idea of a procedural rhetoric—at base, the notion that the computational procedures powering video games are persuasive—nevertheless begins to indicate how something similar might be said at the level of algorithms themselves.

Algorithms can be seen as rhetorical insofar as they exert a persuasive influence upon what is held to be important or true in our social, cultural, political, and economic interactions. And certainly they do, as the example of something so commonplace as a web search reveals. It’s algorithms, after all, that enable search engines to guide us through vast amounts of information toward what they hold to be relevant and significant, potentially limiting our intellectual purview based on how they do so. In a more complex sense, then, algorithms are best understood as rhetorical if we consider that their outcomes are not empirically inevitable but rather the product of a particular set of parameters designed strategically to lead toward a particular kind of result. In other words, algorithms implicitly make a rhetorical argument for what factors matter in order to persuade their “audience” that their resultant outcome is the best, truest, or most important. The simple observation that different search engines will often generate different results when given the same search terms illustrates the extent to which algorithms operate rhetorically in this way. Because the rules programmed into the proprietary algorithms that power respective

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