Understanding How Algorithms Work Persuasively Through the Procedural Enthymeme

Kevin Brock [a,*], Dawn Shepherd [b]

[a] *Department of English Language and Literature, University of South Carolina, Humanities Office Building, Columbia, SC 29208*
[b] *Department of English, Boise State University, 1910 University Drive, MS 1525, Boise, ID 83725*

Abstract

Procedure, when discussed in regards to rhetoric, and to "digital rhetoric" in particular, is framed overwhelmingly in regards to game play (and to video games most frequently). We argue that this view needs to be expanded if scholars of rhetoric are to realize how complex human-computer rhetor systems function in diverse contexts. Such systems do so through *procedural enthymemes*, which persuade audience agents to action through the apparent logic of a given system. Procedural persuasion occurs most often via strategies that facilitate the agent to assume an active role in "self-persuasion" in order to complete a given enthymeme. In this text, we explore the procedural enthymeme as a rhetorical tactic for human and nonhuman persuasion by looking at three case studies of commonly used technological "matching" systems—search engines (Google), online matchmaking (Match.com), and social networking (Facebook)—that employ procedural enthymemes in order to persuade users toward particular engagements with those systems.
© 2016 Elsevier Inc. All rights reserved.

Keywords: digital rhetoric; procedural rhetoric; enthymeme; matching; search; algorithm

> "What you must learn is that these rules are no different than the rules of a computer system. Some of them can be bent. Others can be broken."
> — Morpheus (Laurence Fishburne), *The Matrix*

1. Introduction

For the last two decades, scholars of rhetoric and composition have, with increasing nuance and focus, examined the digital technologies that have become prominent, if not ubiquitous, components of our writing and composing practices. Since scholars of digital rhetoric generally claim to be interested in how rhetors persuade various audiences through both novel and conventional means, this growing interest holds significant promise for our ability to understand and make use of available technologies in more consciously rhetorical ways.

One particularly exciting avenue of exploration has been the recent turn toward procedure and object orientation as a way to recognize overlooked and emerging means of persuasion, especially in regards to rhetorical ecologies wherein nonhuman agents—e.g., organisms, places, ambience—contribute significantly to the dissemination and impact of

---

a particular argument, as explored in diverse ways by such scholars as Marilyn M. Cooper (2011) and Thomas Rickert (2013). However, this engagement with nonhuman rhetorical activity has been relatively limited in regards to *technological* agents, notwithstanding Scot Barnett's (2010) argument toward an "object-oriented rhetoric" picked up by James J. Brown, Jr. (2011) and others; in particular, procedure—specifically, computational procedure, a fundamental component of digital technology—and its related rhetorical potential remain employed primarily, if not exclusively, as a means of understanding video games specifically rather than diverse procedural systems broadly. It is likely that this narrow view of procedural rhetoric is an unintended consequence of video games serving as the frame and focal point for Ian Bogost's (2007b) work defining and arguing for procedural rhetoric as a concept. Such an emphasis is demonstrated in the relevant praxis-oriented scholarship published by compositionists who look to video games as a way to explore students' inventional practices, such as those related to multimodal composition.

This lack of broader application stemming from the comprehension of procedure as a rhetorical approach and a general descriptive frame for persuasion, needs to be overcome if rhetoricians are to develop a deeper understanding as to how increasingly complex and ubiquitous human-computer rhetor systems/ecologies function. As we will argue, such systems do so through *procedural enthymemes*, a concept introduced by Bogost (2007b) to describe how interactive systems can work rhetorically in collaboration with the users thereof (pp. 43-44). As the enthymeme serves as one of two fundamental approaches to persuasion (alongside the paradigm or example—see Aristotle, 1991, I.ii.8), the procedural enthymeme functions to persuade a human or nonhuman agent to action, whether explicitly or implicitly, through the *apparent* logic of a given system, regardless of whether that logic reflects actuality or other logics existing outside the bounds of that system. Such persuasion occurs often through the employment of strategies that facilitate agents to assume they have performed *all* relevant persuasive activity on themselves (rather than with the aid, or due to the influence, of another). In this text, we explore the procedural enthymeme as a rhetorical tactic for human and nonhuman persuasion by looking at three case studies of commonly used technological systems that match data results to user queries—search engines (Google), online matchmaking (Match.com), and social networking (Facebook)—by employing diverse procedural enthymemes that persuade users to engage those systems in particular ways and for particular ends.

2. What is Procedural Rhetoric?

Procedural rhetoric, sometimes referred to as computational rhetoric, is, most succinctly, the use of logical systems by one or more rhetors to invent and deliver an argument. Bogost (2007b) provided an extensive contextualization for this definition, explaining that procedural rhetoric involves "the practice of persuading through processes in general and computational processes in particular [... It] is a technique for making arguments with computational systems and for unpacking computational arguments others have created" (p. 3). In other words, procedural rhetoric serves as a means by which rhetors might more clearly and fully understand the ways that logical structures and systems work to induce particular audiences to action. Accordingly, one who understands how and why such structures operate can compose arguments more effectively through procedure, although even one who is unaware of how procedures function could still compose a procedural argument. Bogost (2007a) clarified his definition of procedural rhetoric in a short essay in which he stated that "[p]rocedurality is a practice of model-building, and procedural rhetoric is a practice of model-based argument-building" (p. 307). Often, procedural models and structures are obscured or de-emphasized in real-world practice so that rhetors might, to use Richard Lanham's (1993) words, expect or be expected to look "through" rather than "at" them as texts worthy of critical scrutiny (p. 5). In some cases, such obscurity is proportionally related to a structure's ability to successfully persuade certain audiences.

In the field of rhetoric and composition, Bogost's ideas on procedural rhetoric have been taken up most fully by scholars interested in the possibilities for ludic composition, and those ideas are realized most effectively and commonly thus far through the sorts of persuasive video games that Bogost focused on (Storment, 2011; Thominet, 2012). While Bogost did not paint video games as unique, nor did he suggest that *play* is necessary in order to understand procedure, he has argued that "only procedural systems like computer software actually represent process with process" (2007b, p. 14). On the one hand, games—and the sorts of video games that college students are most likely to access or are interested in accessing on a day-to-day basis—serve as a perfectly apt medium through which to help them understand and make use of procedural rhetoric, as Matt King (2010) observed in his examination of Bogost, Burke, and the difficulty of creating a procedural system (e.g., video game) that can be kairotic without a constantly changing set of rules or protocols. On the other hand, by filtering so much instruction about procedure through the lens of games, there is a risk that students might comprehend the concept of procedural rhetoric occurring *only* through games rather