

Bioeconomy Institute Trading Cards: Promotional Objects with Internal Purposes

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ABSTRACT: This analysis of a deck of trading cards demonstrates how internal, institutional purposes are embedded in informational and promotional objects that serve multiple audiences and rhetorical situations. The institutional purposes potentially constrain and influence the agency of rhetors and their institutional and external audiences.

KEYWORDS: boundary object, boundary negotiating object, constrained agency, institutions, mobilization loop, trading cards

1. INTRODUCTION

Scholars in rhetoric and communication have often borrowed from social theory to help explain the complex interactions between institutional rhetors and audiences. These investigations have often fallen on a binary of pro-institutional or anti-institutional discourse. However, there has also been movement towards investigating and taking part in the mediation of argument between institutional and non-institutional actors, such as Blythe, Grabill, and Riley's (2008) critical action research work in mediating communication between community members and the U.S. Army Corps of Engineers and Grabill and Simmons' (1998) work in risk communication. The rhetorical analysis given here extends an investigation of rhetorical mediation to institutional objects, here a set of trading cards, explicitly meant to inform but implicitly meant to persuade institutional and non-institutional publics of the worthiness of the institutional enterprise.

Scholars outside the field of rhetoric have theorized the complexities of institutional discourse heavily. Scholars in the fields of organizational science, management, and administration bring to light formal ways in which institutions govern the internal discourse of organizations such as the use of institutional standards (Okhmatovskiy & David, 2012; Seidl, 2007; Westphal & Zajac, 2001). Scholars in the field of social science have treated institutions' external discourses as promotional or advertising. For example, social science inquiry into the field of medicine has coined the term "disease-mongering" to describe institutional promotional and advertising practices (Padamsee, 2011) and has explored the agency issues involved in institutional discourse surrounding breastfeeding (Schmied & Lupton, 2001; Ryan, Bissell, & Alexander, 2010; Wall, 2001).

Similarly, scholars in the field of rhetoric have argued that because institutional persuasion and constraint modifies rhetorical agency, rhetoric is a necessary lens through which to investigate issues of institutional power (Britt, 2006; Faber, 2002; Herndl & Licon,

2007). Rhetoric of science in particular has much to offer the study of institutional discourse since the discipline has shown meaning-making within science to be a social enterprise governed by institutional structures. This paper probes these tensions reflected in a set of trading cards employed by both scientists and administrators in a state bioeconomy institute. For the purposes of this paper, I limit this study to a rhetorical analysis of the trading cards and draw heavily on Latour's mobilization loop as well as the concept of boundary objects to explore the trading cards' intended institutional function and influence on the agency of the rhetors who hold them.

2. BIOECONOMY INSTITUTE TRADING CARDS

The object of this inquiry is a deck of trading cards used by the Bioeconomy Institute (BEI) at Iowa State University. The BEI cards are ostensibly designed for external, informative communication and promotional purposes. Information about the context and use of the BEI trading cards stems from my own experience in being a recipient audience in their use and from informal interviews with the creators of the cards. The goal of this paper is to explore the intended institutional function of the cards and determine the means of persuasion they use, not necessarily to determine their success.

The BEI at Iowa State is essentially an administrative institution. According to its website, the goal of the BEI is to “provide cohesion among the diverse efforts in biorenewable resources on campus” and to encourage “collaboration within departments, colleges and research units” (Iowa State University, 2012). A 5-year NSF grant from the NSF EPSCoR program initiated the Institute, and the Institute is intended to continue grant-initiated collaboration and research into biorenewables. The efforts of the BEI are diverse. According to its website, at the time of this writing the BEI has “engaged: More than 260 faculty and staff affiliated members, 29 departments in all seven colleges and 20 research centers and institutes, industry and federal agencies to sponsor over \$67 million in external funding” (Iowa State University, 2012). As a land-grant university, Iowa State had many pre-existing research projects related to the potentially emerging bioeconomy. The BEI was able to route pre-existing projects to funding opportunities and urge collaboration on proposed and pre-existing projects. The BEI-affiliated programs and departments include seventeen academic programs and departments in four colleges, M.S., Ph.D. and graduate minors in biorenewable resources, nineteen centers/institutions, seven research programs, an unspecified number of industry collaborations and biotechnologies available for private licensing, outreach programs such as a Biorenewables Art Competition, and federal and state partnerships (Iowa State University, 2012). The webpage of the BEI that gives information about the BEI trading cards states that the cards give information about a “fast-moving institute, centers, programs, and partners” (Iowa State University, 2012). Since the Bioeconomy Institute is an administrative body rather than a physical body, these centers, programs and partners are what the Institute attempts to hold together, facilitate collaboration between, and enhance. Throughout this paper, I will refer to these various entities as divisions of the BEI even though this term is an oversimplification that may elevate the BEI beyond its nebulous administrative position. However, as I will show, the BEI trading cards themselves suggest such an institutional organization.

The BEI trading cards are presented and given away as full packs of fifteen cards. They adhere to the traditional physical form of trading cards as they are dual-sided, heavy recycled card stock, the size of a business card, with Institute division name, card number, and

decorative graphic on the front with informative text on the back. These cards most resemble the science trading cards used in pedagogical contexts. However, the design of the cards suggests a nostalgic adult audience rather than a child audience. An analysis of the cards' rhetorical design choices reveals the main audience to be an adult who has a working knowledge of the specialized language, logos, and technologies used on the cards. The cards' formal design, muted colors, and old-fashioned embellishments create an ethos suggestive of Midwestern university agricultural design tradition. The conception of the cards as trading cards is nostalgic and whimsical while the inclusion of web addresses and QR codes mark the cards as promotional documents. The tactile and dual-sided quality of the cards seems to cause a sense of curiosity in people to gain and retain their attention as they flip through the deck. The deck is small enough to fit in a jacket pocket, making it useful for communicators connected to the Institute to keep on hand.

3. USE AND DISSEMINATION OF THE BEI TRADING CARDS

The design and continuing redesign of the BEI cards has been a joint project between various undergraduate and masters science communications interns in the EPSCoR division, the BEI's communications and marketing director, and a contracted local graphic designer. According to the creators, the original audience for the cards was conceived as administrators who worked within the various divisions of the BEI. Because there are many divisions of the BEI, administrators had difficulty remembering them all. The cards were originally envisioned to be memory aids for administrative speakers. As the project grew, a need was discovered for the cards to serve a wider audience, especially since the lines between administrator, researcher, and communicator are fuzzily drawn in many of the BEI's divisions. As well as just being memory aids or speakers notes, the cards were reconceived as a deliverable that could be handed out. So far, the cards have not been widely publicized, but are handed out as an alternative to a brochure or pamphlet. According to the creators, the intended audience now varies. They have been laid out at conferences, handed out when various people (from schoolchildren to politicians) visit the BEI's Biorenewables Research Lab, and have been in use any time various communicators who are connected with the Institute meet new people. Most often, however, the cards are used to facilitate discussion and understanding between a member of the BEI and an outside expert. According to one of the creators, "They fly off the shelves" (S. Rangarajan, personal communication, 11/13/2012).

In the context of a one-to-one presentation, the cards act as visual aids as much or more than speaker's notes, depending on the familiarity of the speaker with the divisions of the BEI. When I was first introduced to the BEI the cards were used at two different times by two different administrators, one of whom is the director of communications and marketing—one of the cards' creators—to familiarize me with the division. Both speakers reshuffled the cards into their preferred order of importance and then began to lay them down on the table in front of me one by one, face up, as they narrated the purpose of each division. For the most part, the images on the front of the cards visually supported and clarified the speakers' information. For example, the Bioenergy Systems Analysis Program card contains a graphic of an energy system with its endpoints labeled "gasoline," "diesel," and "fuel oil," thus clarifying for me that the energy system being analyzed by the program is a literal one. The title of the division is much more intimidating to comprehend than the graphic. In my case, the speakers never flipped over the cards but allowed them to remain visual aids only. However, when I left the

cards were given to me as a souvenir. Since then, I have used the deck myself as a visual aid and memory aid when attempting to explain the goals of the BEI to others.

4. INTERNAL INSTITUTIONAL IMPORTANCE

The institutional importance of the BEI cards is not just in marketing. The deck serves to unify and order the various divisions of the BEI. All cards have the “Bioeconomy Institute” label in the footer, which marks all of the divisions as part of the Bioeconomy Institute, rather than as the individualized programs in which many of the divisions began their lives. Although the cards vary some, the front designs unify the divisions visually and give each relatively equal weight in comparison to the others. The cards are also purposefully labeled with numbers in an order of importance that is currently being disputed. Regardless, the BEI deck’s ordering of cards also orders its divisions. For example, the card numbered 1 in the deck is the card for the Bioeconomy Institute itself. Although the card is designed in exactly the same style and content as the other cards, thus suggesting the administrative aspects of the Institute are no more important than the research and outreach done in other divisions, its label as “No. 1” suggests it should be shuffled to the top and presented first. On the other hand, the beauty of a deck of cards is that this order is not necessitated. Neither of the administrators who used the cards with me presented the Bioeconomy Institute card first. However, the Bioeconomy Institute card is presented first on the BEI trading card webpage.

5. WHERE THE BEI TRADING CARDS FIT IN DISCOURSE SYSTEMS

5.1 Where do the Cards Function on Latour’s Mobilization Loops?

The continuing dissemination, creation, redesign, controversy over and finding of new purposes for the BEI trading cards suggests that they serve an important institutional purpose that fits, sometimes uncomfortably, with both the internal and external goals of science and science communication entities the BEI serves. In Pandora’s Hope, Latour (1999) describes the “circulatory system that keeps scientific facts alive” as a set of mobilization loops that include the mobilization of instruments, colleagues, allies and public representation (pp. 99–100). As discussed in the context of the BEI section, above, the BEI is clearly involved in what Latour terms autonomization, “how a researcher finds colleagues,” since the BEI fits exactly Latour’s definition of a scientific institution (p. 102). As such the BEI also circles in the loop of alliance mobilization and public representation. The distinct loops of Latour’s mobilization visual remain uneasily distinct in practice, however. In particular Latour’s first loop, “mobilization of the world,” where the material content of science, its “expeditions and surveys . . . instruments and equipment . . . the sites in which all the objects of the world thus mobilized are assembled and contained” exist and are mobilized for the purposes of science and science communication, is not necessarily linked and knotted in Latour’s terms, but sometimes are one and the same as objects in the other loops. The BEI trading cards remain in this indistinct position. Latour claims that in this mobilization of the world/instruments exist “so many crucial objects of study for those who wish to understand the mediation through which humans, speaking to one another, increasingly speak truthfully about things” (p. 101). They are mobilized for persuasive purposes as the objects themselves lend authority to the speaker. Latour explains that these objects “present themselves in a form that renders them immediately useful in the arguments

that scientists have with their colleagues” (p. 102). The BEI trading cards show that these objects can also be useful to bridge the gap between various groups to help form alliances and as objects of public representation and promotion.

5.2 Are the Cards Boundary Objects?

Since the BEI trading cards exist in multiple mobilization loops simultaneously and are used to facilitate communication between various groups, it is useful to consider them boundary objects. The concept of boundary objects have proven a helpful construction to think about how objects facilitate conversation, collaboration, persuasion, and other interactions. In science studies, boundary objects have been defined as “an analytic concept of those scientific objects which both inhabit several intersecting social worlds . . . and satisfy the informational requirements of each of them” (Star & Griesemer, 1989, p. 393). However, their redefinition for rhetoric has involved an understanding that boundary objects can create “integration and understanding” rather than “contest, controversy, and demarcation” (Wilson & Herndl, 2007, p. 129). Boundary objects as a concept have been criticized for being too simple a model, too vague and prolifically used (Lee, 2005; Wilson & Herndl, 2007). As a result, theorists have begun to demarcate types of boundary objects by their various uses and purposes.

5.3 Are the Cards Boundary Negotiating Artifacts?

One such demarcation is the concept of a “boundary negotiating artifact” suggested by Lee’s (2005) work in collaboration theory. Lee defines boundary negotiating artifacts as objects that “record, organize, explore and share ideas; introduce concepts and techniques; create alliances; create a venue for the exchange of information, augment brokering activities; and create shared understanding about specific design problems” (p. 403). These artifacts are crucially different from boundary objects because the objects themselves are not created through collaboration, but rather imposed by members of the collaboration. Lee suggests five types of boundary negotiating artifacts: self-explaining, inclusion, compiling, structuring, and borrowing. Self-explanation artifacts are personal notes that rarely get shown to others. Inclusion artifacts are individuals’ proposals of ideas. Compilation artifacts are objects that attempt to create shared understanding of information during practice. Structuring artifacts are often contested artifacts that attempt to create a shared vision of a project. They “establish ordering principles, establish tenor in narrative forms, and . . . direct and coordinate the activity of others” (p. 398). Finally, borrowed artifacts are those used in “unanticipated ways” by non-originators (p. 401). For an example of this, Lee describes the deconstruction (literally, by way of scissors) of an educator’s narrative document and exhibition floor plan by a fabrications coordinator to create fabrications notes.

It may be useful to consider the BEI trading cards as boundary negotiating artifacts since they function in several of these areas. They were first conceived of and are used as personal memory aids, which makes them self-explanation artifacts. They have an institutional purpose of persuasion in creating a shared vision of the equality and ordering of the divisions of BEI, thus making them a structuring artifact. Finally, they are often borrowed and used in unanticipated ways, such as their inclusion as links on the BEI website.

5.4 Complications

One complication of the easy fit of the BEI trading cards into Lee's schema and boundary objects in general is that the trading cards do not necessarily help establish or negotiate boundaries that did not exist previously. Nor is their purpose exactly to help communicators cross the boundaries that the cards represent. Although the cards do facilitate understanding in external and promotional communication between BEI representatives and lay publics or external experts, their internal function both minimizes and reinforces the boundaries between divisions.

In their design, the trading cards suggest a reformulation of the divisions' boundaries. The most impactful quality (especially for divisions that existed before BEI was created) is that the cards reduce what were both relatively freestanding programs and programs with close relationships to other institutions, to member programs, or divisions of another overarching institution. Although the BEI presents itself as a service institution in its website, the trading cards impose a top-down structure as suggested by the BEI card labeled "No. 1" and every card being labeled with the name and website for the BEI. The equality of the cards' design also creates an equality of BEI divisions, with programs such as the Biobased Industry Center given the same weight as the Biorenewables Art Competition. Boundaries are also restructured between divisions such as the Biochar Program and the Biorenewables Research Laboratory that houses it. Yet, the ability for communicators to reshuffle, discard, and manipulate the use of these cards in a rhetorical situation softens this imposition of boundary restructuring.

6. THE BEI TRADING CARDS' INFLUENCE ON RHETORICAL AGENCY

The question of how these cards influence any rhetor's agency is an over-simplifying question, since agency in any rhetorical situation is reliant on the whole of the rhetorical situation, rather than any one aspect of the situation. However, Herndl and Licona's (2007) exploration of *constrained agency*, particularly through their frame of ethos, can clarify how the BEI trading cards potentially affect the authority of institutional communicators. Herndl and Licona remind, "[A]uthority and agency are not always opposing forces within complex institutions" (p. 134). Therefore, their term *constrained agency* regards "the relationship between agency and authority" rather than the imposition of authority on agency. The positive relationship between agency and authority is explained via ethos, "a legitimating function" that "implies the authority to speak and act with consequences" (pp. 134–135).

Conceiving of the BEI trading cards as an authoritative object that is used in authoritative practices suggests the cards both create a communicative space that did not exist before and defines the borders and tenor of that space. Herndl and Licona (2007) explain,

[A]uthoritative practices often reveal a power to stabilize, limit, and control meaning and action. Because it authorizes a rhetor to speak, act, and represent, the authority function often represents and reproduces dominant rhetorical and social relations. As it limits the proliferation of meaning and action, authority can constrain agency. (p. 143)

Later, the authors redefine both authority and agency as "a social location, (re)produced by a set of relational practices." These social practices concern "the capacity and opportunity to rarify discourse and action" (p. 142).

Conceiving of the BEI trading cards as an object of rarefaction provides understanding that an institutional purpose of the cards is to lend authority to the holder of the cards to the exclusion of rhetors without access to the cards. They also rarify only certain ways of conceiving of the BEI divisions, such as suggesting through their design both an equality and ordering of the divisions. Although rhetors may reshuffle the deck and lay the cards down in patterns, the graphics and text on the cards are intended to constrain the cards' meanings within institutionally accepted definitions.

In sum, the BEI trading cards embody an argument in their design and can provide a space in which rhetors can attempt to inform and persuade. They increase the ethos of the rhetor while also constraining the rhetor's conception of BEI. They negotiate the boundaries of BEI divisions by restructuring, minimizing and reinforcing while also serving the purposes of individual rhetors by serving as memory aids and sometimes being borrowed for unoriginally intended uses. They facilitate communication and understanding between divisions and publics. They can act in every loop of Latour's science mobilization diagram.

7. CONCLUSION

Discovering the potential institutional functions of the BEI trading cards does not determine the cards' effect on those purposes' contextual success. However, this analysis of the cards does potentially provide a starting point for inquiries into the ethics and rhetorical, persuasive necessity of physical objects that embody institutional purposes. This paper has demonstrated the ways in which institutional purposes can be embedded in informational and promotional objects that serve multiple audiences and rhetorical situations. Although functioning on all of Latour's mobilization loops, and complicating definitions of boundary object and boundary negotiating object, these trading cards do seem designed to serve an institutional purpose that influences the agency of communicators and their institutional and external audiences.

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