May 22nd, 9:00 AM - May 25th, 5:00 PM

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Commentary on: Mark Aakhus, Smaranda Muresan and Nina Wacholder’s “Integrating Natural Language Processing and pragmatic argumentation theories for argumentation support”

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1. INTRODUCTION

Aakhus (2007, p. 112) described our contemporary communication environment as “built-up,” meaning that it is an environment in which natural human communication abilities have been augmented by many inventions, one built over another. Over millennia of human civilizations, argumentation practice has been built up to resemble natural arguments about as closely as modern urban dwellings resemble caves.

For thousands of years, humans have been innovating in how they manage disagreement, and presumably, those innovations that have survived and spread are ones that have been recognized as improvements over pre-existing practice. Argumentation in the 21st Century is not the same set of practices as those that made up argumentation even as recently as 2500 years ago. What we work with today is the accumulation of many earlier inventions that have been in some sense successful, minus those that have become obsolete.

There have been, and still are, many ways to manage conflict within any community, but for the technologically advanced societies of the 21st Century, the characteristic forms of argumentation are the products of a built-up environment that incorporates all sorts of advances in how people discipline their own judgment and how they seek alignment with others. Among these advances, I would say that the most important inventions have been of three general types: (1) abstract logics, (2) scientific methods, and (3) rule-governed disputation frameworks. These advances are woven so tightly into contemporary argumentation that they have become a sort of invisible cultural infrastructure on which all sorts of other activities can be built—and without which we simply cannot have what we nowadays consider to be a coherent conversation (Jackson, 2012).

To appreciate what Aakhus, Muresan, and Wacholder (2013) are attempting in this project, it is important to know that they are not simply trying to automate argument analysis, but to design argumentative practice for a communication environment that has changed profoundly. “Communication design happens,” Aakhus (2007, p. 112) wrote, when we attempt to “shape the possibilities for
communication.” Our communication environment has already been dramatically redesigned over the past 50 years, with the rise of global data communication infrastructure and associated new media. Aakhus, Muresan, and Wacholder are looking for new ways of thinking about argumentation that can produce design hypotheses that fit this new landscape.

Aakhus, Muresan, and Wacholder do not suggest, but I do, that the rise of information technologies in the 20th and 21st Centuries will very likely provoke a fourth category of innovations in argumentation practice that will be comparable in influence to the three I have just mentioned. These innovations will be provoked by new problems, or by old problems that take on new significance. Some of these new problems are already evident, even though the path to solving them remains completely unknown.

2. A GLIMPSE OF THE FUTURE

New practices are forming around new media without the intervention of design theorists or reflective design practitioners. I cannot say whether these practices are positive or negative developments. But the text in Figure 1 illustrates several trends that need examination from a design standpoint.

Figure 1: using social media to solicit support from a calculated public

First, this message illustrates distinct ways in which social media differ from conventional broadcast media. Exploiting a connection I made sometime during the
2008 Obama Presidential campaign, the message came to me by email (along with countless other such messages, not only during the electoral campaigns but also in support of specific legislative priorities). But more importantly, the appeal here is pure social media: just put my name to a list of those who seek to "hold climate deniers accountable." Though maligned as "slacktivism" (e.g., by Morozov, 2011), putting your name on something has suddenly become common as a form of political participation, and it is not just about feeling good. Messages from the Obama campaign or from Organizing for America never come without an appeal for a specific action, and often it is registering support in written form.

Second, the form of participation requested is one step removed from any actual political issue. Note that the message alludes to, but does not address, the debate over global climate change. The main point is to charge opponents with violations of “second order conditions” for participation in debate and to exert discipline within a discourse that does not offer many guarantees that people will participate in good faith (van Eemeren, Grootendorst, Jackson & Jacobs, 1993). If we were to try to position this text within a reconstruction of the debate over human influence on global climate change, the fact that it makes no assertions about global climate change (but assumes much) would need to be represented, but the main thing that would need to be represented is the notion of policing a debate by using social pressure to punish rule violators, through ridicule if need be.

Third, the message is a beautifully clear example of a targeted ad, sent only to a “calculated public” (Gillespie, 2013). All of us have become used to seeing advertisements online that seem to appear just at the moment we are interested in making a purchase, for just the sort of product we are seeking to buy. These are targeted advertisements, inserted into web pages such as results pages for Google searches, and based on algorithms that predict your interest from huge bodies of data about you and your online behavior. The Obama Presidential campaign of 2012 relied extremely heavily on the same technology concepts, conducting extensive predictive modeling to support decisions about how to target political messages (Murphy, 2012). Since I received the message, you can see that I am an Obama supporter. Nevertheless, I am very troubled by the use of behavioral targeting in politics; it represents a choice to ignore those who disagree.

This glimpse of the future is meant to suggest that as argumentation theorists update their ideas to fit emerging argumentation practice, they will have to be prepared not only for the kinds of texts and participants we have been used to, but also for novelties of the kind illustrated in Messina’s message. They will need to be able to accurately represent its content and its relevance to a broader discourse, but will also have to reckon with its targeted reach and its leveraging of small acts of commitment by otherwise silent participants.

3. A RESPONSE-CENTERED COMPUTATIONAL APPROACH

Aakhus, Muresan and Wacholder review two computational strategies for analyzing argumentation and develop a set of requirements for argumentation support systems. With deep affinity for this ambitious project, my only questions will be about the promise in the particular set of technology concepts they have favored.
Are the technology directions recommended by Aakhus et al. likely to yield design hypotheses that can improve argumentation? Reflecting on the sorts of problems made evident by this one glimpse of the future, the answer I have come to is “Yes, but not enough.”

Because the 21st Century information environment is characterized by vast bodies of highly fragmented mentions of any controversial topic, and by forms of participation roles that may be little more than “likes” or “retweets,” a viable contemporary approach to reconstructing significant controversies must be computational. Argument no longer proceeds, if it ever did, by advocates presenting the entirety of their side’s case for a proposition, updated to answer all known counterarguments. Because all public and much private argument now occurs in retrievable form, contributions may take the form of an isolated point or two whose relevance to an ongoing discourse may or may not be explicitly noted. Contributions to significant controversies do not occur in a single forum but in all sorts of exchanges, some with direct consequence for collective action (such as legislative debate) and some with less clearly defined influence on the high stakes exchanges (such as email messages to known supporters, or political talk radio). In other words, the texts that make up a controversy must be retrieved from heterogeneous sources that cannot be specified in advance, and the collective that is engaged in that controversy must be inferred not only from the texts that can be retrieved but also from the audiences to whom those texts were addressed.

So we do need technology support that can retrieve arbitrarily large bodies of text, and we also need a way to extract from those bodies of text the content that makes a difference to some collective decision. But we also need a way to capture the fact that individual texts typically do not belong to any one discourse. A text generated in response to one controversy may be appropriated for use in other controversies, and this possibility is greatly amplified by retrieval methods that locate content that no individual person realized in advance would be relevant.

Our concepts of participation require adjustment as well. Before any controversy can be usefully visualized, we need to discover which beliefs and commitments are relevant to that controversy, but we also need to discover which human actors have made themselves relevant to that controversy by espousing the beliefs or accepting the commitments. So graph methods are going to be central to understanding the new argumentation, and the one exception I would take to what Aakhus et al. propose is to note that it is unclear why it would be a good idea to apply these methods in a way that detaches beliefs and commitments from the actors who hold them. Beliefs within any controversy gain strength not only from their consistency with other beliefs but from the number of people adhering to them; that is why Messina wants me to sign something that can be used to hold climate deniers accountable. So people need to be included in our visualizations along with ideas, with at least some people or groups of people represented as vertices with links of varying strength and fixity. This becomes really important for controversies where the fixity of a belief is not a matter of its support from other statements but of the number of people whose minds would have to change in order to make any difference to the controversy as a whole. (It does no good to conclusively refute a belief if large numbers of people continue to believe it
anyway.) Persuaders are already learning to exploit technologies that build fixity, and we should be considering the consequences of this and the possibility of designing technologies that promote other values.

Finally, we need to incorporate temporality. We need to know what responds to what, but we also need to know what happened after that. All past texts are available at once for contemporary controversies, and each new text immediately becomes a record of something said in the past but available for the indefinite future, even when a line of argument is tried and abandoned. Visualization of the whole space explored within a controversy is important, but the notion that “winning” an argument will be signaled by an explicit concession is one we are probably going to have to give up. Arguments that have been conclusively lost continue to appear in contemporary controversies for some time, but with diminishing presence or more restricted circulation. If we want to understand the progress of argumentation toward some form of consensus, we need to be able to represent particular beliefs as slowly fading from view within a body of discourse.

It is no criticism of Aakhus, Muresan, and Wacholder to say that what they propose will not improve the practice of argumentation enough. If a system built to their requirements improves the practice of argumentation at all, even for a few controversies within a few communities, that is praiseworthy. But many more of us with interest in argumentation should be paying attention to how new practices are forming around the new communication environment and considering what else might be done to bend these changes in positive directions.

4. CONCLUSION: FURTHER DESIGN OPPORTUNITIES

Scholars, journalists, and public intellectuals have all noted serious threats to rational discussion presented by our new communication platforms. Even if we skip entirely the degradations of public discourse that have been charged against the 20th Century broadcast media, threats specifically associated with the rise of the Internet already include:

1) the decline of investigative journalism and consequent loss of credible information on a wide range of significant controversies (McChesney, 2013);
2) an open invitation to distribute misinformation, through both ignorance and malevolence (Morozov, 2011);
3) the emergence of powerful information filtering mechanisms (such as Google’s page ranking algorithm) that affect the information a member of the public will be offered on any topic (Pariser, 2011); and
4) the rise of targeting technologies that focus on reaching those likely to agree with a source while ignoring those likely to disagree (as in Obama’s 2012 campaign: Murphy, 2012; Tufekci, 2012).

When we consider what to do with new information and communication technologies, we should be looking at the new problems these expose, and trying to see how those new problems might be solved. This is quite different from looking at
new technologies as a source of solution for our familiar problems. Thus, the true
test of what Aakhus, Muresan, and Wacholder are proposing should not be whether
it helps us do things we have wanted to do in the past (such as identifying fallacies),
but whether it will help us address emerging problems: the disappearance of
important fact-finders, the ever-expanding store of support for false beliefs, the
filtering of content that protects people from contradiction, the emergence of
targeting based on predictive modelling, and a long list of other practical
consequences of changes in the communication environment that we have only
begun to comprehend. It is too early to assess how a response-centered
computational approach will unfold, but without some such step as Aakhus and
colleagues propose, our theories of argument will become increasingly detached
from 21st Century argumentation practice.

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