

Laughing in the Face of Climate Change? Satire as a Device for Engaging Audiences in Public Debate

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Inger-Lise Kalviknes Bore¹ and Grace Reid²

Abstract

Satire has long offered social and political commentary while entertaining audiences. Focusing on a Canadian stage play and its local reception, this article considers some of the key benefits and challenges of using satire to promote public engagement with climate change science. It demonstrates that satire can promote active and positive engagement with climate change debates. However, using satire risks confining representations to the humorous realm and requires communicators to consider the humor preferences of different publics. The article proposes recommendations for using satire in science communications.

Keywords

climate change, culture and science, environmental communication, public engagement, public understanding of science

Introduction

Satire uses humor as a weapon, attacking ideas, behaviors, institutions, or individuals by encouraging us to laugh at them. It may be gentle or hostile,

¹Birmingham City University, Birmingham, UK

²University of Alberta, Edmonton, Alberta, Canada

Corresponding Author:

Inger-Lise Kalviknes Bore, Birmingham School of Media, Birmingham City University, Baker Building, City North Campus, Perry Barr, Birmingham B42 2SU, UK.

Email: ingerlise.bore@bcu.ac.uk

clear-cut or ambiguous, aimed at “us” or “them”—or it may oscillate between different approaches, remaining flexible and surprising. With a long tradition in elite and popular culture, satire has provided an important means of offering social and political commentary while entertaining audiences. This article focuses on the role of satire in climate change debates, examining a contemporary Canadian stage play that uses satire to mock irresponsible corporations and apathetic citizens.

U: The Comedy of Global Warming (hereafter *U*) was written and directed by Ian Leung and ran for 9 days in Edmonton, Alberta, Canada, in December 2010. The performance included two acts that each ran for about 1 hr and 10 mins. The audience ranged from 6 to 29 people at each performance, and approximately 180 people saw the play in total. The play’s local setting is important both because it highlights the relationship between Alberta’s oil industry and global climate change issues and because it addresses an audience based in a province that has benefitted financially from that industry.

As the play’s story begins, the Pacific island of Tuvalu is sinking as a result of climate change, and oil executive Albert A. Oyl (Al) has “sponsored” Tuvaluan refugee Tivo’s emigration to Alberta, Canada. Tivo is now Al’s lodger and domestic worker, but the employer soon takes advantage of this living arrangement to initiate a sexual relationship that clearly makes Tivo uncomfortable. Tivo then starts dating Clinton Carew, host of the environmental TV program *Hot Stove Planet*. While Tivo and Clinton’s relationship develops, Al gets sick and eventually falls into a coma. We learn that he has contracted West Nile Virus after being bitten by an infected mosquito that had travelled North due to climate change. While visiting Al at the hospital, Tivo accidentally unplugs the life support machine and is violently attacked by Al, who appears to have suddenly regained consciousness. During the fight, they both announce that they are actors and that the play’s story is all just a show, but Al nevertheless proceeds to beat Tivo to death. Clinton then joins Al on stage and tells the audience that we need a new story about climate change that does not end in disaster. Finally, the three sit down to dinner with an invited audience member.

The play has a satirical undertone and incorporates a range of comedic devices that encourage audience members to laugh, including jokes, comic juxtapositions, surprises, humorous musical performances, and humorous audience participation scenes. However, we will argue that the primary goal of the humor was not to make people laugh but to facilitate their engagement with ideas about climate change. The play’s serious intention is particularly evident in audio and video segments from the fictional *Hot Stove Planet* program, which features comments by real-life scientists and politicians. Significantly, these segments do not include comments from industry

representatives, and all featured contributors are climate change believers. Finally, the play has a companion website (www.albertaville.ca) that includes information about its 22 interview subjects, recommended resources on climate change, suggestions for how members of the public can take action against climate change, and an invitation to write a postcard to Alberta's Minister of the Environment.

Informed by the argument that public engagement with science should involve dialogue rather than just the transmission of factual information (House of Lords, 2000), the goal of this article is to consider some of the benefits and challenges of using satire for climate change communication. We begin by outlining our theoretical framework before reflecting on key methodological issues. We then present the results from our analysis of interviews with Ian Leung, the play itself, and questionnaires and focus groups with audience members. The findings identify two key benefits associated with the use of satire for engaging audiences in climate change debates, and two emerging obstacles. First, satire can facilitate audience reflection, investigation, and action. Second, the use of humor can help audiences manage feelings of fear, helplessness, and guilt, which may otherwise prevent them from taking action. On the other hand, communicators using satire also face two interlinked challenges: They must ensure that the climate change issues they represent are taken seriously, while satisfying audience demands for laughter. Our discussion reflects on the implications that these findings have for the use of satire in climate change communication.

Theoretical Framework

The past decade has seen a shift in the kind of public engagement activities practiced. Previously, the goal of public engagement events was to increase the general public's scientific literacy through the transmission of facts (Bodmer, 1985), but now there is growing consensus that we must engage publics in scientific dialogue (House of Lords, 2000). In analyzing satire's potential to promote public engagement with broader audiences, we consider the type of public engagement incited through the satirical mode of *U*.

There is no single, accepted theory of humor, but incongruity theory provides a useful starting point for examining the role of humor in satirical texts. As Morreall (1983) notes, incongruity theory focuses on laughter as a cognitive response to "something that is unexpected, illogical or inappropriate in some other way" (p. 15). For example, Bergson (2004) argues that a key function of laughter is mocking the failure to adapt to social change. In his view, society demands "the greatest possible degree of elasticity and sociability," and rigidity therefore appears comical (p. 10). This constructs humor

as corrective, a view that informs satire more obviously than certain other comedic forms such as “farce and ribaldry” (Paul, 1994, p. 48). According to Hodgart (2010),

There are many ways of looking at this life, and satire’s one of them. To respond to the world with a mixture of laughter and indignation is not perhaps the noblest way, nor the one most likely to lead to good works or great art; but it is the way of satire. Satire, “the use of ridicule, sarcasm, irony etc. to expose, attack, or deride vice, follies etc.” (as the dictionaries define it), has its origin in a state of mind which is critical and aggressive, usually one of irritation at the latest examples of human absurdity, inefficiency or wickedness. (p. 10)

Drawing on incongruity theory, our analysis will discuss some of the ways that *U* encourages audiences to laugh at society’s failure to adapt to climate change. In particular, we will consider how this sets up a humorous incongruity between conflicting discourses around climate change and social responsibility.

However, while seeing humor as having a corrective function is useful for exploring how satire can be used to communicate ideas about climate change, we must not reduce the complexities and variety of humor or satire to this single function. For example, Herr (2007) underlines the “varied forms” of satire in contemporary theater (p. 460), whereas Griffin (1994) suggests that satire may be usefully thought of as “a ‘mode’ or a ‘procedure’” and rejects the possibility of devising a “unified” theory of satire (p. 4). Griffin also identifies a shift in academic perspectives on this mode: The 1960s emphasis on satire as “a moral form and a rhetorical art” has been replaced by an interest in case study analyses, varieties of satire, and the “complexity and ambiguity” of specific texts (p. 2). Our own study can be positioned within this latter body of work.

When paying attention to the specificities of our case study, we also need to consider the particular characteristics of theatrical satire. *U* can be thought of as *applied theater*, which is “an engaged, social, artistic phenomenon.” This umbrella term covers a range of different approaches to theater, but Leung’s play is among those with “an overt political intent to raise awareness and to generate change” (Prendergast & Saxton, 2009, p. 11). However, as Herr (2007) notes, a key critical dilemma associated with theatrical satire is the belief that “the presence of human actors on stage fosters sympathy.” While such sympathy can help the satirist by encouraging audience members to recognize themselves in the characters, it also undermines “the possibility of sardonic detachment.” Herr suggests that this conundrum is often resolved “by tempering the bitterness of the attack.” He describes it as “instructing through laughter rather than punishing through scorn” (pp. 460-461). Our

performance analysis will examine the use of this approach in *U*, discussing shifts between “instruction” and “scorn” but also considering how this interplay was used to communicate ideas about the roles of citizens, politicians, and corporations in climate change.

Although satire is often used rhetorically to present specific arguments and mock opposing views, we must be mindful of textual openness. If we conceive of humor as based on incongruities between competing discourses, we need to recognize that it is inherently malleable and unstable. Texts can try to anchor this ambiguity to get specific arguments across, or they can try to reinforce the sense of ambiguity to facilitate a wider range of interpretations. As Spicer (2011) notes,

Satire is a slippery customer. It weaves in and out of reality and makes itself accessible enough for the (sometimes thoughtful) laugh in the moment, but it is just tricky enough to not be pinned down. For it is often we forget that the intention of the satirist is one thing; what the audience does with satire is quite another. (p. 19)

This textual ambiguity can make satire a useful form for texts intended to engage audiences in climate change debates. For example, in their discussion of theater as a public engagement tool, Nisker, Martin, Bluhm, and Daar (2006) emphasize that audiences should be able to draw connections between a play’s representations and their own real-life context, they should be able to imagine themselves in the positions of characters, and, finally, they should be encouraged to interpret representations in a variety of ways. Our own analysis of *U* examines its use of textual ambiguity and considers how different audience members responded to such moments. Our key interest here is in exploring what implications textual ambiguity might have for encouraging audiences to engage actively with climate change debates.

O’Neill and Nicholson-Cole (2009) recently argued that “fearful” and “shocking” representations of climate change are “likely to distance or disengage individuals from climate change, tending to render them feeling helpless and overwhelmed when they try to comprehend their own relationship with the issue” (p. 375). In comparison, satire’s use of comic elements may help prevent these specific barriers. Nisbet and Scheufele (2009) have called for further research “on the potential for using this style of humour [satire] as a tool for public engagement on science” (p. 1775). They believe that satire could be developed as a tool to make science more accessible for nonelite audiences, particularly young people. Having outlined how our study is informed by extant literature on satire and climate change communication, we will now reflect on some key methodological considerations.

Research Method

Our study draws on four sets of data: interviews with Ian Leung, who is the playwright and director; performance analysis of the play; questionnaires with audience members; and focus group discussions with audience members. This mixed-method approach aimed for “complementarity” by examining different aspects of a phenomenon in order to gain a fuller understanding of it (Greene, Caracelli, & Graham, 1989, p. 258). The interviews helped us understand the playwright/director’s intentions for the play; the performance analysis evaluated how the play used satire to engage with climate change issues; the questionnaires shed light on how a broad range of audience members responded to the play; and the focus groups enabled us to take a closer look at some of the most significant issues that emerged from the questionnaire research. Our analysis of these data sets identifies key themes regarding the relationship between the play’s satirical mode and its engagement with climate change issues. However, we will also examine contradictory or conflicting ideas to give a sense of the complexities of the data.

Interviews

We conducted two moderately structured interviews with Leung. The first interview took place 14 weeks before the play opened, while the second was conducted after the play’s run concluded. Both lasted about an hour. The timing of these interviews enabled us to get a rich sense of the different processes involved in the staging of the play, rather than just looking at the finished text. The transcripts were fully coded to identify themes around Leung’s articulated perceptions of the play’s use of satire and its representations of climate change.

Performance Analysis

In addition to interviews, our research also used a performance analysis to examine the play’s “mechanisms of generating meaning and its particular way of thinking and communicating thinking” (Rozik, 2010, p. 267). Our performance analysis of *U* was based on observations of several live performances as well as DVD recordings of two performances. The analysis focused on the relationship between the play’s satirical mode and its representations of climate change. As discussed in our literature review, we were particularly interested in shifts between a humorous tone and a serious tone (Mulkay, 1988), between “instruction” and “scorn” (Herr, 2007, pp. 460-461), and between anchored meanings and ambiguity (Spicer, 2011, p. 19).

Through this focus, we sought to assess the extent to which the play encouraged audience members to reflect on climate change issues and engage actively with climate change debates.

Questionnaires

We used questionnaires to gather the responses of as many audience members as possible. The questionnaire asked respondents to provide demographic information (e.g., gender, age, and occupation), and it also asked participants why they decided to attend the play and whether they stayed for the total duration of the play. It then included 15 questions about their responses to the play and their understanding of climate change. Four questions were closed-ended, while 11 were open-ended. The design of these questions was informed by existing literature on climate change communication. This included Whitmarsh's (2009) argument for the importance of examining respondents' attitudes toward climate change in terms of perceived causes, impact, and desired action, as well as Nicholson-Cole's (2005) emphasis on investigating people's perceptions of their own abilities to take meaningful action. We also drew on Lowe et al.'s (2006) analysis of audience responses to cinematic representations of climate change. Their study examined the extent to which watching the disaster movie *The Day After Tomorrow* (2004) led viewers to change their perceptions of risk, levels of concern, motivations for taking action, and sense of responsibility for contributing to climate change.

Although the play uses the term *global warming*, our questionnaires adopted the term *climate change*, and this is also the phrase we will use in this article. As Whitmarsh (2009) notes, "Since the 1980s, the term 'global warming' has been commonly used to describe the impact on climate of increased levels of greenhouse gases linked to human activities" (p. 403). However, while this metaphor "may have been effective in capturing the public's imagination about this global risk, it obscures the complex and potentially devastating range of effects" (p. 403) associated with climate change.

We used several strategies to recruit audience members to complete our questionnaire. First, we advertised our research on the play's website. We also had a display in the theater foyer that outlined our research and provided questionnaires for people to complete, and a member of our research team approached people during intermission to note the contact details of audience members who wanted to participate in our study. Finally, the actor who played Clinton Carew made an announcement at the end of every performance asking people to complete a questionnaire. As an incentive, we entered

Table 1. Ages of Questionnaire Respondents.

Age, years	<20	20-29	30-39	40-49	50-59	60-69	70-79	80-89
N	2	29	13	11	15	9	2	1

those who completed the questionnaire into a draw for a CAN\$60 Amazon.ca gift certificate. The result of these recruitment strategies was that 87 research participants completed an e-mail version of the questionnaire, while one completed a paper copy. One of these 88 participants had not actually attended the play, which left us with 87 valid responses. This represents just under half the audience for the play.

Our questionnaire respondents comprised 44 women and 43 men who ranged in age from 13 to 82 years (Table 1). Four were foreign nationals, while the rest were Canadians and the vast majority lived in Alberta. They tended to be in higher education or in what we might consider middle-class occupations. A total of 21 participants were students, including 19 university students, 1 junior high school student, and 1 high school student. Twenty respondents worked in creative professions, self-identifying as filmmakers, artists, actors, directors, theater designers, and so on. Another three self-identified as actors in addition to their stated primary profession. A total of 17 participants worked in teaching or research, while 10 had administrative positions, and 7 worked in communications. A further 9 participants worked in a variety of other professions, including environmental consultant, reservoir engineer, and construction contractor. Three were retired.

This demographic information indicates that our study focused on middle-class citizens, while our questionnaire data also suggested that our participants tended to have a strong interest in either climate change issues or theater. While this is an obvious methodological limitation, it also highlights that one of the challenges facing this type of climate change communication is that it typically reaches only a narrow group of people. Going to the theater has traditionally been a middle-class cultural activity, and theaters have struggled to attract diverse audiences (Kolb, 2005). Moreover, in her audience study of climate change film *The Age of Stupid* (2009), Howell (2011) found that 77.6% of her respondents stated that they saw the film because they were interested in or concerned about climate change. She contrasts this with the climate change blockbuster *The Day After Tomorrow* and suggests that the latter's success "in reaching an audience not already especially concerned about climate change may suggest that climate change communications would benefit from being packaged in a more populist format, or within a fictional frame" (p. 184).

Focus Groups

The completed questionnaires provided us with a broad overview of audience responses to the play and helped us begin to identify some of the benefits and challenges of using a satirical mode in climate change communication. This analysis informed the design of our focus group methodology, which aimed to explore some of the emerging issues in more detail.

At the end of the questionnaire, audience members were invited to express their interest in attending a focus group. As incentives, we offered a CAN\$20 Amazon.ca gift certificate and agreed to reimburse participants for their theater tickets and parking costs. Of the 87 questionnaire respondents, 21 said that they were willing to participate in a focus group. The questionnaire research had indicated that an interest in environmental issues or in theater was among the key factors motivating people to attend the play; thus we decided to conduct one group with 6 participants who expressed a strong interest in environmental issues and one group with 6 participants who expressed a strong interest in theater. Our second selection criterion required that each group include participants who enjoyed the play and participants who had expressed more critical responses. We hoped that these audience groups might offer a range of perspectives on the play. As Becken (2007) notes, "The method of focus groups does not aim to generate data representative of a greater population, but seeks to enhance our understanding of a particular issue" (p. 353). The first group included three women and three men aged between 23 and 59 years, while the second included four women and two men aged between 24 and 56 years.

The focus group participants were encouraged to set their own agenda for the discussion (Kitzinger & Barbour, 1999). However, we had also prepared a set of questions that we used to prompt participants when they failed to discuss issues that we felt were particularly relevant to our research. The focus group conversations were fully transcribed, and our analysis of the audience data concentrated on identifying and examining emerging themes in terms of how audience members understood the play's representation of climate change issues and how they articulated their own responses to the play. Our analysis also used deviant case analysis to identify examples of opposing views being expressed. According to Frankland and Bloor (1999), deviant case analysis is important because it gives the reader a sense of the amount of consent and dissent that exists for a particular topic.

Results

The findings from our multimethod study illuminated a range of benefits and obstacles associated with the play's function as a public engagement

tool. In this section, we will focus our discussion on two benefits and two obstacles associated with the use of a satirical mode for climate change communication.

Using Satire to Encourage Reflection, Investigation, and Action

The first key benefit associated with the use of satire in climate change communication is that the satirical mode can promote active engagement with climate change by encouraging reflection, investigation, and action. Our interviews with Leung demonstrated that the play had two main goals. The first goal was to encourage audiences to seek information about climate change. In our first interview, Leung said, “I want people to watch the show and go and find out for themselves [whether the information in the play is true]. So that’s partly why the website exists—to give them a place to go.” The second goal was to encourage audiences to consider their own ability and desire to take action against climate change:

Leung: The main message in the show, aside from the education of it, was our lifestyle not only prevents us, but distracts us from doing something about global warming. And I think we have to remember that there are people elsewhere who are affected by global warming, and global warming is happening, and [we need to ask] are we okay with that? . . .

Interviewer: So, was the [goal of the] play to put responsibility on the general public to take action on climate change?

Leung: Yes. Yes, it was. (Interview 2)

Leung’s emphasis on encouraging reflection, information gathering, and action is in line with current ideas of promoting active citizen engagement through climate change communication (Lorenzoni, Jones, & Turnpenny, 2006).

Our performance analysis showed that the play’s satirical mode was central to the rhetorical strategy of promoting a sense of curiosity. The intermittent “talking heads” videos, in which scientists and politicians discussed climate change issues, largely remained within the realm of serious discourse. However, at other points in the play, the satirical undertone provided conflicting cues regarding boundaries between fact and fiction and between earnest argument and jest. For example, such textual ambiguity can be seen early on in the play, when Al tells the audience that the Pacific nation of Tuvalu is expected to be submerged under water due to climate change and

that inhabitants have been fleeing the country since 2003. He explains that he has “sponsored” Tivo’s migration to Canada, and it is clear that Tivo is now his lodger and domestic worker—a rather unlikely arrangement. Audience members unfamiliar with Tuvalu may be unsure whether the nation actually exists, whether it is indeed disappearing due to climate change, and whether its inhabitants are actually fleeing to countries like Canada. These ambiguous representations encourage audience members to seek further information, while the portrayal of Al and Tivo’s relationship may also facilitate reflection on the relationship between the local and global in climate change, as well as the particular responsibilities of citizens, corporations, and politicians in the oil-rich province of Alberta.

Across our 87 questionnaire responses, 20 audience members specifically constructed the play as thought-provoking or challenging. This is one example:

If it wasn’t funny, it would have felt more like a lecture, and I would not have been interested in being lectured about climate change for 2.5 hours. The play makes a great jumping off point for further discussion about climate change. (Questionnaire 43)

The responses suggest that, at least for some audience members, the play’s satirical mode contributed toward Leung’s goal of promoting reflection on climate change issues.

However, a few audience members disliked the play’s textual ambiguity. Across our questionnaire data, eight respondents complained that the play suffered from lack of a clear message about climate change:

The message was vague but it seemed to say that government needs to do more . . . exactly what was unclear. (Questionnaire 12)

[The play] had moments of great ideas but overall it didn’t add up to anything. Ian seems to be saying “I don’t know what to do about climate change—you tell ME.” (Questionnaire 63)

While Leung used textual openness as a strategy for encouraging audiences to seek out information elsewhere, these participants suggested that the play needed a clearer message.

In addition to examining how the play might have encouraged reflection and investigation, the questionnaires also included closed questions designed to explore the extent to which it made audience members want to take specific actions in relation to climate change. Our results indicated that

36% ($n = 31$) wanted to visit the play's information website; 29% ($n = 25$) wanted to participate in the play's postcard campaign to Alberta's Minister of the Environment; 54% ($n = 47$) wanted to pay more attention to media stories about climate change; 41% ($n = 36$) wanted to actively seek out information about climate change; 67% ($n = 58$) wanted to discuss climate change with family, friends, colleagues, and so on; and 20% ($n = 17$) wanted to become involved in activism around climate change. Of course, the extent to which respondents actually went on to take such action is another matter (see Howell, 2014, in press).

However, in the focus group for audience members interested in environmental issues, one participant reported that she had participated in activism as a result of seeing the play. The group had been discussing their confusion about the play's self-reflexive ending, where the actors break character and sit down to dinner with an audience member:

Well, like you, I was really confused and my friend and I spoke. Not for days because she went back home, but we spoke, I remember, that whole night . . . after that night I remember my friend and I wrote a letter to our MPs. We felt like social change might be naive for our age, but we felt like we had to. The message was that you have to do something, and you have to do it now because there's going to be repercussions if you don't. (Environment focus group)

This audience member's account of her continued reflection on the play's ending suggests that the textual ambiguity associated with satire can help prolong audience engagement with representations of climate change beyond the moment of reception. While this will not always lead to activism, as in this case, it may still encourage the reflection, information gathering, and action that Leung intended.

Using Humor to Manage Feelings of Fear, Helplessness, and Guilt

The second significant benefit associated with the use of satire in climate change communication is that a humorous tone can help promote a positive engagement with climate change. As discussed in our literature review, O'Neill and Nicholson-Cole (2009) advise against "shocking" representations of climate change that can contribute to public disengagement (p. 375). Our two interviews with Leung indicated that the *U* script started with an aggressive satirical tone, which was subsequently modified through the rewriting process:

I think the first draft that I wrote probably was written from the gut and it was . . . everything I wanted to do in the show—everything as a director and artist I wanted to play with in the theater, and everything I felt about the issue. And then as the drafts went on, I think there was a change to something that attempted to moderate, I guess, the spleen that went into the first draft. (Interview 1)

This quotation highlights the diversity of satire as a form, reminding us that a satirical mode *can* most certainly be used in a way that makes audiences feel scared or guilty about climate change. However, in our second interview, Leung explained that while he had intended “to be much more merciless,” he eventually chose to represent all characters as having “good intentions.” The resulting play, he argued, was more accessible to audiences who did not share his own understandings of climate change.

Our performance analysis considered the extent that the play might be seen to represent climate change in a way that promotes feelings of fear, guilt, or helplessness. We found that the play largely avoids encouraging these emotions by using the characters of Clinton and Al to distinguish between “us” and “them.” “We” are represented by Clinton, who is gently disparaged because he believes that climate change is happening but is nevertheless failing to take sufficient action. Clinton is contrasted with Al, who lets Tivo live in his house as a servant, exploits Tivo sexually while denying his own homosexuality, and refuses to help Tivo’s sister because, he says: “I have to draw the line somewhere.” Through the representation of Al, the play aggressively mocks “them,” those who actively resist “green” policies for their own personal gain. As such, Al’s behavior towards Tivo works as a metaphor for environmental exploitation and for the deliberate disregard of evidence in climate change science.

Through the satirical mode, the representations of Clinton and Al can be seen as shifts between “scorn” and attempts at “instructing through laughter” (Herr, 2007, pp. 460–461). For example, in the play’s “Energy Saving Scene” (which is conducted in the dark), Clinton tells the audience,

You know, I have a deep dark secret to tell you. I know global warming is supposed to be this terrible thing, and I know I host a *show* about it, but, (*whispering*) I just don’t care. I mean I suppose I care, really, but I don’t do anything about it, which probably means I don’t care *enough*. Don’t get me wrong, I’m not proud of it. I mean I’m a good person. But *global warming?* (*He sighs the sigh of the overwhelmed; we hear his back thump against the chair as he slumps in surrender.*)

All right, (*he gets up*) I'm going to try and shed a little light on the problem. Call this a crash course in greenhouse gases 101, or why it's so hard to see the problem. Energy-saving music please.

Clinton then goes on to explain just how little of our atmosphere is actually made up of greenhouse gases and concludes,

Which begs the question, how can something so small make such a huge difference on our planet? Well, it just can, you'll have to trust me and hundreds of atmospheric scientists on that one. (Extract from *U* script)

The satirical mode here contrasts two discourses on climate change, embodied by Clinton's character: an environmentalist discourse concerned about climate change effects and a discourse of disengagement and apathy. However, the play does not berate audience members for taking insufficient action against climate change. Instead, Clinton's speech functions to explain such passivity by underlining the difficulty of comprehending the relationship between the small proportion of greenhouse gases and the notion of enormous, global impacts. Then, encouraging audiences to overcome that challenge, the speech goes on to reinforce the importance and urgency of the issue. Thus, through the representation of Clinton, the satirical mode can be seen to promote positive engagement with climate change issues by encouraging audiences to recognize aspects of themselves in Clinton's character, laugh at their own folly, and reconsider their own role in climate change.

Our questionnaires examined audience responses to the use of humor in climate change theater by asking, "Do you think using humor in a play about climate change is a good or bad idea? Please explain." Of our 87 respondents, 66% ($n = 57$) approved of the use of humor in climate change theater, while 31% ($n = 27$) identified both positive and negative issues around it, and 3% ($n = 3$) did not give an opinion. None of the respondents disapproved of the use of humor. Across the questionnaire data, audience members identified a range of reasons why they perceived humor to be useful in this context. Some of these will be considered in the next section, while we here focus on a recurring argument that the use of humor helps prevent audiences from feeling too overwhelmed, frightened, or guilty by cultural representations of climate change. This idea was articulated in 21 of the responses to this question, and this is one example:

Humor helps to engage people and keep them from feeling preached at and /or overwhelmed with the guilt or shame of something like global warming. (Questionnaire 15)

However, one questionnaire respondent argued that the second half of the play was too dark:

The oil magnate dies, but he's also a human being that someone had formed some sort of relationship with. Comedy? Again, if the play had stuck to its purpose to be a comedy while raising environmental issues I think it would be more successful. This depressing, overwhelming, and sad second part will not encourage people to take action, at least not me. (Questionnaire 78)

The participant's belief that the last half of the play was "depressing" was a minority view among our questionnaire and focus group responses, but this quote is interesting because it clearly articulates an audience member's experience that "sad" representations of climate change are not conducive to encouraging action. The notion that comedy alleviates people's feelings of being overwhelmed, scared, or guilty was not brought up in the focus group discussions. Having outlined two key benefits associated with the use of satire in climate change communication, we will now go on to consider two significant obstacles that emerged from our case study.

Ensuring Climate Change Issues Are Not Confined to the Realm of Humor

The first key challenge posed by the use of a satirical mode is that climate change communicators must negotiate the boundary between "the realm of humour" and "the realm of serious discourse" (Mulkay, 1988, pp. 21-23). As Spicer (2011) argues, "the freedom of satire carries with it a need to take responsibility and cultivate out of satire useful moments of political creation where the satirist attempts to question authority, but is also proposing something politically productive" (p. 25). We have previously demonstrated that this was central to Leung's development of the play, as well as to the accompanying website, which provided resources to encourage audiences to take action on climate change.

Our performance analysis identified shifts between a humorous tone and a serious tone as a key strategy by which the play was able to contribute to climate change debates. While the play adopted a satirical mode, several elements were clearly cued as serious, including audio and video recordings of scientists and politicians discussing climate change issues; "The Energy Saving Scene," where Clinton provided scientific information about climate change gasses; and several scenes in which Tivo described the distressing impacts of climate change on citizens of Tuvalu. Such shifts enabled the play

to scorn the oil industry and politicians for failing to take responsibility, disparage citizens for not taking sufficient action, encourage concern for victims of climate change effects, present arguments for the urgent need to address climate change issues, and offer scientific information.

However, while our study has so far shown that many audience members liked the play's use of humor, our questionnaire data also included a minority that expressed concern about the balance between humor and seriousness. In response to the question "If you could change anything about the play, what would you suggest?" one participant said,

I would trim off about 40 minutes of extra jokes, etc. that became very self-indulgent . . . I would not let the environmental issues fade into the background. (Questionnaire 31)

This audience member articulates a concern that the play placed too much emphasis on humor, at the expense of its representation of climate change issues. A related concern was articulated by a focus group participant who argued that the play's use of humor was both a strength and a weakness because he believed that laughter can make us more receptive to new ideas, but "the humor just didn't stop during it":

When you're going to have a powerful dramatic moment, make it powerfully dramatic, don't just try to find the humor in every single thing . . . really shock-and-awe me [with serious drama] when you need to, and then make me laugh, and then BOOM, hit me [again] with solar plexus [of serious drama]. (Theater focus group)

While this participant appreciated the humorous elements of the play, he argued that the underlying humorous tone undermined the play's impact. Thus, while our performance analysis identified shifts between humor and seriousness as key to the play's strategy for offering productive proposals regarding climate change issues, some audience members still suggested that, in this play, climate change issues risked being confined to the realm of humor.

Making Audiences Laugh

The second important challenge posed by the use of a satirical mode is that audiences will expect (or at least hope) to laugh. Our first interview with Leung demonstrated that he wished to avoid producing "a straight out

educational play” that was “just a step away from a lecture.” Instead, he described a dual strategy in which the play not only develops “a relationship story that is trying to approach it [global warming] more as a parable” but also includes comedic elements as “another way to keep people happy for 2 hours, or for however long the show is going to be” (Interview 1). When the play had finished its run, he reflected on how successful he felt it had been in terms of amusing audiences:

I think that I wanted them [the audience] to laugh and there were laughs [but] not always. . . . For me the laughter was there to make it easier to watch the difficult stuff. On one level it’s giving [the audience] sugar for watching some of the moments in the show that . . . become more didactic in nature. (Interview 2)

In this comment, Leung uses a discourse that sees humor as sugaring the pill; he wanted the humorous tone to help audiences engage with challenging, serious material. The privileging of seriousness in *U* is also evident in the play’s promotional tag line, which read, “It’s not funny . . . really, it’s not.”

The notion of sugaring the pill clearly separates humorous and serious discourse and constructs laughter as a means to an end. This approach distinguishes satire from comedic modes like slapstick or farce, where laughter is the key goal. Our performance analysis demonstrated that this play’s satirical mode did incorporate a range of comedic devices, including irony, jokes, slapstick, juxtaposition, and musical comedy. However, although these devices certainly encouraged audiences to laugh, they mostly formed part of the play’s overarching critique of society’s failures in the face of climate change. For example, when Tivo questions Al about the appropriateness of his forceful sexual advances, Al’s response sets up a comic juxtaposition between his sexual practices and his representation of his own sexuality. This not only represents him as dishonest and hypocritical but also works to satirize the dominant conservative values of Alberta, which the play associates both with homophobia and with climate change denial:

Al: Tivo. Look. I’m not gay. This is Alberta. I’d have to be crazy to be gay in this province. Do I look crazy to you?

Tivo: You look a little . . . your eyes look a little like they don’t believe what your mouth is saying.

Al: Tivo you slay me. Look. You may be my employee but we are also two grown up, responsible men. So I’ll make you a deal. Let’s treat last night as an isolated event—which may or may not happen again and if it does, it too will be an isolated event. (Extract from *U* script)

The exchange between Tivo and Al functions as a source of humor, but it still contributes to the play's critique by drawing a link between the denial of climate change and the denial of homosexuality. This critical function was also the case for the play's musical performances, which included lyrics such as these:

The frozen Tundra methane holds
 In ancient bogs and swamps of old
 But when the melting process starts,
 We'll burn our ass when the arctic farts. (Extract from *U* script)

As seen in these examples, the humor in *U* worked as a tool, rather than as an end goal.

Nevertheless, audiences will assess all comedic texts, at least in part, on the basis of how funny they are found to be, and Leung expressed disappointment that the play was not a "laugh riot" (Interview 2). Audience assessments of the play's comic intention were examined by our questionnaires, which said, "The play describes itself as a comedy. Did you find any particular aspects of it funny? If yes, please give examples." Of our 87 respondents, 63% ($n = 55$) gave entirely positive responses, 25% ($n = 22$) articulated both positive and negative responses, 9% ($n = 8$) were entirely negative, and 2% ($n = 2$) did not answer this question. Textual elements that tended to be singled out as funny included the play's musical numbers, its use of audience participation, the character of Clinton, and the relationships between the different characters.

However, among the mixed responses, many described the play as "sometimes" funny, while the negative responses dismissed the play as entirely unfunny. Three audience members explicitly questioned the play's definition as a comedy. This is one example:

I did find it funny, but not as funny as I thought it would be because it was advertised as a comedy. (Questionnaire 3)

When asked how the play could be improved, a fourth respondent wrote,

Add some jokes or take the word "comedy" out of the title and make the characters more than crudely drawn caricatures. (Questionnaire 28)

The comedy label was discussed further in the focus groups:

Male participant 1: I found it mildly amusing. It would be a bit of a stretch probably to call it a comedy. But to me there were some funny breakout

laughing moments. I can't remember what they were off the top of my head, but I do remember laughing.

Female participant: I think mainly around slapstick humor, that was the burst out laughing moment.

Moderator: Okay.

Male participant 1: Yeah, that's one of the things that we talked about after the play. A lot of slapstick in there. You can do a bit of slapstick, but after a while it was tiresome. So yeah, we laughed occasionally. (Environment Focus Group)

These examples of audience responses suggest that promoting a play as a comedy introduces the challenge of making audiences laugh. It encourages audience members to expect that the play will foreground jokes and comic situations and to evaluate the play partly based on how funny they find it (Cook, 1982). This challenge is compounded by the play's need to negotiate diverse audience tastes in comedy. Such tastes will depend on a broad range of factors, including class, age, education, ethnicity, nationality, gender, sexuality, political orientation, previous cultural consumption, and so on (Kuipers, 2006). However, as previously discussed, our interviews suggested that Leung conceived of the target audiences for this play primarily in terms of their perceptions of climate change. Thus, comedic tastes did not appear to be part of his strategy for targeting specific audience segments, and the audience responses indicated that this was sometimes problematic. For example, across the questionnaires, a recurring complaint focused on the play's inclusion of gay relationships. One participant said,

A lot of energy went into making the play. They added the gay part to make it funny, but I'm not sure it's appropriate for young people. I also don't think the swearing is suitable for young people. I would like to see the play be more appropriate for young people because they have an important role to play in global warming. (Questionnaire 46)

Another concern was raised by a focus group participant:

I felt very uncomfortable with that part of the play, because I am a gay, rural Albertan. . . . Climate change is a big issue that is difficult to make traction on in Alberta, and also gay acceptance is a big issue with the same kinds of [complicated] stuff around it. I really found . . . what disturbed me the most about it [the play] was that Oyl's relationship with Tivo was a very manipulative, abusive one, and it wasn't a healthy relationship at all. It wasn't handled well at all, and it didn't move forward acceptance or anything on that end, and—at the same time—I felt it really distracted from the climate discussion. Especially

I was thinking of my [conservative] grandparents or parents watching it [and] that wouldn't help them engage with either of the issues. (Theater focus group)

These examples raise two different concerns about the play's representation of gay relationships. The first, articulated by a 71-year-old woman in a heterosexual marriage, suggests that any representation of homosexuality is transgressive and unsuitable for younger audience members. The second, expressed by a 23-year-old gay man, constructs the representation of Al and Tivo's relationship as offensive because it was a very negative portrayal of homosexuality within the wider cultural context of homophobia in Alberta. Although articulated from different perspectives, both of these audience responses suggest that the play's representations of homosexuality distracted some audience members from its representations of climate change issues. In total, this particular concern was raised by 21% ($n = 18$) of our questionnaire respondents. The finding demonstrates that in addition to meeting audience expectations of jokes and comic situations, a satirical play also faces the challenge of negotiating culturally specific ideas about what constitutes acceptable subject matters for comedy. While a play satirizing the denial of homosexuality may appeal to certain audience segments, it will not necessarily appeal to the type of audience attracted to a play about climate change. Thus, climate change communicators should consider the specific challenges that engaging with additional cultural debates might pose, and reflect on the possibility that such representations may distract certain audiences from the climate change issues.

Discussion and Conclusion

Through our analysis of the *U* stage play, interviews with its playwright/director, and its local reception, this article has identified two important benefits associated with the use of a satirical mode in climate change communication. First, the textual ambiguity associated with humor means that satirical texts can be "slippery" (Spicer, 2011, p. 19) and particularly open to interpretation. This ambiguity is facilitated by comic incongruities between competing discourses, which make satirical texts unstable. For example, through the character of Clinton Carew, *U* constructs a comic incongruity between a discourse of social responsibility and a discourse of apathy: It juxtaposes his perception of how he *should* feel and act in relation to climate change with his actual response to this issue. This conflict is not resolved within the play. The textual openness that results from such incongruities may encourage audiences to make sense of representations of climate change based on their local context and personal experiences

(Nisker et al., 2006). As our interviews with Leung demonstrated, it may also be used to invite audiences to question representations and encourage further reflection and information gathering. This can help extend audience engagement with climate change issues beyond the moment of reception.

Second, we found that satire's use of humor as a device for critique can help promote a positive engagement with climate change. Our interviews with Leung demonstrated that he wanted the play to function as a form of "applied theatre" (Prendergast & Saxton, 2009, p. 11) that engaged audiences in climate change debates. He also explained that, in order to make the play accessible to a wider range of audiences, he modified the aggressive tone he had originally adopted for this satire and tried to represent all characters as well intentioned. As Herr (2007) notes, theatrical satire often struggles to maintain "sardonic detachment," because audiences are likely to feel sympathy towards the actors on stage (p. 460). Leung's approach negotiates that dilemma in part by encouraging audiences to laugh at Clinton Carew's failures to adapt to the threat of climate change (Bergson, 2004) and to recognize their own failures through this character. By privileging "laughter" over "scorn" (Herr, 2007, pp. 460-461) the play takes advantage of humor's potential to help create a "safe" space (Neale & Krutnik, 1990 p. 69) for exploring difficult issues. As Bakhtin (1987) proposed when writing about humor in medieval carnivals, "Laughter demolishes fear and piety before an object, before a world, making of it an object of familiar contact and thus clearing the ground for an absolutely free investigation of it" (p. 23). Thus, using humor can help communicators avoid overwhelming audiences with feelings of fear, helplessness, and guilt, which may otherwise discourage them from taking action against climate change (O'Neill & Nicholson-Cole, 2009). Both of these benefits are in line with current ideals in science communication, which emphasize the importance of promoting active public engagement with science rather than simply transmitting factual information.

However, our study also identified two significant challenges: First, while satire can help promote a positive engagement with climate change through its protective comic distance, communicators need to take measures to avoid confining their engagement with climate change issues to the realm of humor, so that they can make productive proposals to climate change debates. While the distinction between the realm of humor and the realm of seriousness is analytical and it is clearly possible to make fun of climate change while remaining committed to taking action against it, it is important that the use of humorous distance does not discourage citizen action.

Second, adopting a satirical mode means that audiences will expect to laugh. Our interviews with Leung demonstrated that he perceived the show's comedic elements primarily as a way to sugar the pill and make it easier for

audiences to engage with the more difficult material, while the reception analysis suggested that some respondents were disappointed that the play did not have a greater emphasis on comedic elements. Managing to cater to different humor preferences while ensuring that audiences remain sympathetic to the underlying ideas may be particularly difficult for climate change communicators hoping to reach diverse publics. One potential risk is that satirical climate change communication may be “preaching to the choir,” which was also one of the concerns playwright and director Leung expressed in our interviews. Based on our examination of these challenges, we would like to propose two recommendations for communicators interested in adopting a satirical mode for the promotion of positive and active engagement with climate change.

First, the satire must eventually succeed in breaking down the barrier of comic distance, so that audiences are encouraged to *care* about climate change issues. In the case of *U*, Leung incorporated serious moments where the play provided information about climate change science and policy, and invited audiences to sympathize with a character who had suffered because of climate change effects on his community.

Second, labels such as “satire” or “comedy” set up audience expectations of jokes and comic situations, which means that the text will be, in part, assessed on how funny it is deemed to be. Communicators must therefore consider the humor preferences of their target audiences. While it is notoriously difficult to predict what will make people laugh, it remains vital to consider the extent to which humor content and styles may appeal to different publics based on factors such as age, gender, class, nationality, and so on. As Kuipers (2006) notes, differences in humor between social groups can be linked to differences in “cultural knowledge,” “sensitivity to certain boundaries,” “style,” and “taste” (p. 11). She further maintains that humor appreciation often depends on audiences agreeing with the intent of the humor, and this is particularly important in satire because it so clearly constructs a particular worldview. This play demonstrated the importance of cultural sensitivity, as audience engagement with climate change issues was, at times, distracted by material that some considered transgressive. This obstacle is particularly significant if communicators are trying to target a diverse range of publics. Thus, while it is certainly possible for satirical texts to have broad appeal, targeting niche audiences makes it easier to tailor the satirical mode to expected humor preferences and reduces the risk of failure.

This article has sought to contribute to debates around climate change communication by examining the usefulness of satire as one particular cultural form. Through our analysis of *U*, we have been able to identify benefits and challenges that can be generalized beyond this case study, and we hope

that our recommendations can be of use to climate change communicators interested in developing satirical texts or using humor as a device to engage audiences. However, this is still an area in need of further study. In particular, while satire has long played a part in political, social, and cultural debates, other comedic modes and genres might also be useful devices in climate change communication. However, such forms come with different sets of benefits and challenges, which would need to be examined.

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Author Biographies

Inger-Lise Kalviknes Bore, PhD, is a lecturer in media and cultural theory at Birmingham City University (United Kingdom). Her research focuses on audience engagement with screen media.

Grace Reid, PhD, is an adjunct assistant professor of science communications at the Centre for Research in Youth, Science Teaching and Learning (CRYSTAL) at the University of Alberta. She is also a communications lecturer in the Department of General Education at Mount Royal University in Calgary, Alberta, Canada. Her research expertise is science and environmental communications.