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Genetically Modified Organisms, India's Farmer Suicide Event, and Environmental Discourse: Rhetorical Situations, Frames, and Ideographs in the Debate on Genetically Modified Organisms

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INTRODUCTION & LITERATURE REVIEW

The rapid development of technology and the steady growth of clinical-scientific capacities for knowledge acquisition and knowledge production have combined to make genetic engineering a ubiquitous issue for public debate in the 21st century. This new development in biotechnology has resulted in the emergence of the genetically modified organism (GMO). The most commonly known GMOs, foodstuffs like Golden Rice (Stone, 2014), the transgenic corn used in the Insect Resistant Maize for Africa (IRMA) Project (Wangalachi, et al., 2011), or GMO cash crops like Bt cotton (Kloor, 2014; Shiva, 2009; Shiva, 2013; Gruère & Sengupta, 2011), have been hailed by some as a potentially groundbreaking technological development which heralds the dawn of a new day (Glover, 2010). The historical struggle of human demand against the inherent scarcity of natural resources may, the narrative goes, finally be coming to an end, because the emergence of GMO agricultural products has the potential to feed the world, and massively reduce food insecurity, resource inequality, and human suffering (Glover, 2010; Gruère & Sengupta, 2011; Kloor, 2014; Saletan, 2015a), while increasing the profitability of global agriculture (Nadolnyak, Miranda, & Sheldon, 2011).

As exciting and promising as the potential implications of GMOs are, joy at the innovative potential represented by GMOs is far from universal. Indeed, many have expressed concern about the potential implications of the arrival of GMOs. For critics, GMOs are believed to be unnatural, untested, and unsafe (Cook, 2008; Fernandez, 2012; Kloor, 2014; Kvakkestad & Vatn, 2011; Lundquist, 2015; Overdorf, 2012; Rodriguez & Asoro, 2012; Saletan, 2015a; Sanvido, et al., 2012; Shiva, 2009; Shiva, 2013; Vogel, 2014; Wangalachi, et al., 2011). Additionally, many conflate the emergence of GMOs with the arrival of a new method of biopolitical control, heralding the victory of positivistic Western science and high technology

over more organic ways of being in the world (Nuti, Felici, & Agnolucci, 2007; Stengers, 2015). Regardless of who is correct, we are now perched precariously on the precipice of "the GMO event" (Stengers, 2015). To mark the human costs of these developments, anti-GMO advocates frequently point to an increase in agrarian suicides throughout India as a direct result of the expansion of GM technology in the global south (Gruère & Sengupta, 2011; Kloor, 2014; Overdorf, 2012; Saletan, 2015; Shiva, 2009; Shiva, 2013). In the rest of this essay I track the nature of the public GMO debate as a question of rhetoric. Using the "Farmer suicides" (Stone, 2014) as a starting point, I explore the framing of the global debate about GMOs, and argue that the core of the GMO debate is tied up in dueling notions of nature and technology. This analysis is driven by three theoretical issues in communication: rhetorical situations, frames, and ideographs.

Devos et. al. (2008) trace the birth of GMOs in the United States to laboratory work conducted in the 1970s as a direct response to newfound sensitivity regarding resource availability. Where the 1960s marked a flourishing U.S. economy, the 1970s brought oil crises to and general economic downturn to the United States and its allies in the West. These co-constitutive economic crises "led to a strong public concern about the limited availability of natural resources on earth and about employment" (Devos, Maeseele, Reheul, van Speybroeck, & de Waele, 2008, p. 33). These sudden shocks to the system precipitated incredible interest in gene manipulation, distinct from selective breeding, and genetic study in the sciences, leading to the development of recombinant DNA technology. Devos et al. describe r-DNA research as yielding a process by which plasmids and genetic characteristics of particular organisms could be "cut" from their longer DNA strands, and then, by use of specially engineered bacterial viruses, cause those DNA segments to integrate in new configurations in new organisms (2008).

Eventually, these technologies for engineering began to percolate outside of the university laboratories from which they originated, finally becoming a central concern in a multi-billion-dollar global industry (Rodriguez & Asoro, 2012; Shiva, 2009; Shiva, 2013).

In the years interceding the development of r-DNA techniques and the present day, GMOs have become a hot topic in political spheres both technocratic and democratic. In the European Union, for example, the introduction and advertising of GMOs and their byproducts have been stringently regulated since 1997 (Sanvido, et al., 2012; Stengers, 2015; Kvakkestad & Vatn, 2010; Nuti, Felici, & Agnolucci, 2007). Sanvido, et al. (2012) outline the rationales and implications of the GMO moratorium enacted in Europe thusly:

> …cultivation requires an environmental risk assessment (ERA) of potential adverse effects on human health and on the environment (and on biodiversity in particular). Approval is only granted if the ERA indicates that the risks of the GM crop are negligible. In this regulatory evaluation, risk managers must decide which kinds and levels of environmental changes are relevant and represent environmental harm (p. 83).

Sanvido and his co-authors articulate a troubling fact-of-the-matter: there is no consensus on what constitutes "environmental harm". Thus, establishing standards of "environmental harm" especially in relation to the use of GMOs is an ongoing process, and the conclusions we may reach about "environmental harm" from that process will be defined not necessarily by science, but by conceptualization and communication.

The lack of consensus as to what defines "environmental harm" has created something of a cottage industry in the academy, as researchers in the sciences and public policy work to establish and evaluate novel frameworks for risk assessment in the context of global GMO

proliferation. Sanvido et al. hope that their research "may result in a better and more transparent evaluation of the probability of harm to biodiversity due to the cultivation of GM crops" (p. 82). Kvakkestad and Vatn (2010) isolate that one of the key problems surrounding the potential environmental impact of is the rise of "uncertainty and ignorance". "Use of GM-crops," they say, "is characterized by uncertainty, ignorance, ambiguity, and potentially long time lags between the introduction of these crops and the possible appearance of harm" (p. 524).

The argument that we simply do not understand the implications of widespread cultivation of GMOs and thus should not move forward with their use is common among GMO skeptics (Rodriguez & Asoro, 2012; Saletan, 2015; Saletan, 2015a). Saletan (2015; 2015a) argues that GMO skeptics are poor advocates who frequently use duplicitous language and research. He rejects the notion that GMOs are the result of a dangerous new technology which should be resisted, and instead focuses on dispelling what he believes are regressive environmental myths propagated by luddites and the environmentalist fringe. He cites, for example, numerous "authorities" and activists whom he says have actively attempted to undermine the proliferation of GMOs by dishonest means. Greenpeace, he argues, issued reports in 2004 and 2006 which condemned a newly developed genetically engineered (GE) papaya as posing a unique environmental and economic risk. Saletan believes that contrary to Greenpeace's narrative, the potential for environmental and economic harm was driven by Greenpeace's efforts to obstruct the process by which the new strain of papaya may have been regulated and introduced (2015a).

Saletan (2015) takes particular umbrage with generalizations made by GMO skeptics. As a case in point, he cites GMO skeptic Claire Robinson's (2015) analysis of a World Health Organization (WHO) webpage regarding GMOs. The WHO states that "Different GM organisms

include different genes inserted in different ways. This means that individual GM foods and their safety should be assessed on a case-by-case basis and that it is not possible to make general statements on the safety of all GM foods" (2016). Where Saletan (2015) finds that a plain reading of this WHO statement would lead to the common sense conclusion that any broad debate about the general safety of GMOs is largely bankrupt, he argues that Robinson uses the WHO's statement as a justification for more heavily regulating and scrutinizing GMOs than organic products, implicitly asserting the general *unsafety* of GMOs.

I find the ongoing arguments between Robinson and Saletan interesting first and foremost because their exchange seems to represent a unique feature of the public discourse surrounding GMOs: it's about nature and technology. Where Saletan accuses Robinson of privileging organically produced agricultural products at the expense of GMOs, Rodriguez and Asoro (2012), indicate that such a preference for the sanctity of "nature" and "the natural" dominates widespread visual rhetoric regarding GMOs by using graphics which show GM products as monstrous violations of nature. Preoccupations with the natural are not limited to the visual rhetoric surrounding GMOs. Indeed, Devos et al. (2008) find that "the fascination of creating artificial life (or of 'playing God' and pushing nature beyond its limits) and the fear of its unintended and uncontrollable consequences have found a symbolical representation in the Frankenstein myth" (p. 33) permeate the GMO debate more generally. Additionally, a quick look at some of Greenpeace's reports on issues related to the environment, agriculture, and food security supports this assertion, with Benno Vogel (2014) arguing that as an alternative to genetic engineering, research energy should be invested in the development of selective breeding practices which mimic the survivability of some specially designed GMOs without using technological manipulation to change the fundamental nature of particular organisms.

Additionally, concern regarding the potential negative implications that GMOs may have for environmental sustainability are frequently framed as a question of "nature vs. technology" elsewhere. This debate is best typified by the widespread concern underlying much of today's GMO skepticism: the protection of biodiversity (Sanvido, et al., 2012; Shiva, 2009; Shiva, 2013; Wangalachi, et al., 2011; Vogel, 2014). Shiva (2009; 2013) in particular describes the effect of the burgeoning global monopoly on seeds, enabled only by the development of GM seeds, as part of a process which establishes monoculture in agriculture. The rise of this monoculture, driven by technology, destroys the natural biodiversity of any number of biospheres. Specifically, she isolates that the capacity for gene use restriction technology to undermine global biodiversity caused the multilateral Convention on Biological Diversity to ban the use of such seeds (2013). While no out-right "ban" on these seeds exists, the Convention did call for a moratorium until further research could be conducted (2006).

One final consideration which informs the debate surrounding GMOs is the question of institutions and institutional logic. The institutions which develop new agricultural technologies and/or perform research into techno-agricultural advances have a substantial impact on the strategies chosen to introduce new technologies to governments, trade organizations, farmers, and the public (Devos, Maeseele, Reheul, van Speybroeck, & de Waele, 2008; Nadolnyak, Miranda, & Sheldon, 2011; Kvakkestad, 2009; Kvakkestad & Vatn, 2010; Wangalachi, et al., 2011). Kvakkestad and Vatn (2010) isolate three different, salient GMO governance regimes which are largely defined by institutional relationships, writing that,

> The three governance regimes (GRs) compared are: GM-crops are produced by private firms and these firms are made liable for harm (GR1); GM-crops are produced by private firms and the government decides whether the crops should

> be marketed (GR2); and GM-crops are produced and the government decides whether the crops should be marketed (p. 524).

Kvakkestad and Vatn go on to isolate that problems with governance arise because of questions regarding institutional research norms and institutionally desired outcomes, finding frequent conflicts of interest between private firms which produce GMOs and the governmental organs which are designed to regulate them. Additionally, Kvakkestad (2009) finds that the profit motives of corporate agriculture change the nature of their research relative to public institutions.

The motives which underwrite GMO research, production, and regulation are central features of much of the public debate surrounding GMOs. Many view GMOs as a part of a corporatist attempt to dominate international affairs vis-à-vis a distinctly neoliberal logic which ultimately undermines local economic development in the name of global monopoly (Fernandez, 2012; Overdorf, 2012; Shiva, 2009; Shiva, 2013; Stengers, 2015). Given the broad nature of the debates, communication has become a central facet of navigating international policy decisions regarding GMO regulation. The Insect Resistant Maize for Africa (IRMA) Project was launched with a carefully designed communication and public awareness strategy which aimed to explain the benefits and nature of GMOs simply but accurately to interested parties in Africa to encourage the adoption of Bt maize, designed to resist crop failures caused by stem borers in Africa (Wangalachi, et al., 2011, p. 4694). At least one other study (Solli, Bach, & Åkerman, 2014) argues that communicative gaps between the institutionalized scientific community and broader public create confusion about the nature of GMOs and transgenic technology, and privilege opposition to GMOs in the public sphere.

In the rest of this essay I track the nature of the public GMO debate as a question of rhetoric. Using the “Farmer suicides” (Stone, 2014) as a starting point, I explore the framing of

the global debate about GMOs. This analysis is driven by three theoretical issues in communication: rhetorical situations, frames, and ideographs.

THE FARMER SUICIDE EVENT

There appear to be two core narratives regarding the farmer suicide event. One of those narratives, driven primarily by environmental advocates Belen Fernandez and Vandana Shiva, maintains that the Monsanto engineered Bt cotton seeds which had rapidly proliferated across India failed, causing massive crop failure and economic loss for local farmers (Fernandez, 2012; Kloor, 2014; Sadanandan, 2014; Shiva, 2009; Shiva, 2013; Stone, 2014; Overdorf, 2012), which resulted in a wave of suicides amongst India's agricultural population. The argument presented in those accounts of the farmer suicide event is that Monsanto, a representative of the creeping neoliberal politics of the twenty-first century, had managed to use the WTO and other neoliberal entities to introduce their genetically engineered Bt cotton to India.

Once present, the stories go, Monsanto, in its effort to spread a new monoculture amongst cotton seeds, came to control the seed market in India, making seeds more expensive for farmers. As Monsanto raised the cost of production for farmers in India, western governments were enabled by the WTO to heavily subsidize their agriculture markets, which then flooded the rest of the world with cheap agricultural products, thus decimating the earning potential of Indian farmers (Fernandez, 2012; Overdorf, 2012; Shiva, 2009; Shiva, 2013). The argument made by Fernandez and Shiva is very clear: the use and failure of Bt cotton seeds by Indian farmers caused a massive wave of suicide amongst Indian farmers.

The other narrative, that of the farmer suicide skeptics, doesn't discount the troubling spike in suicides amongst agricultural laborers in India, but instead argues that the claims of Shiva and other GMO skeptics that Bt cotton had caused such a crisis are inaccurate. Stone (2014) and Kloor (2014) note that the largest spike in Indian farmer suicides cited by anti-GMO activists took place in Andhra Pradesh in 1998, preceding the government's 2002 approval for

cultivation of Bt cotton by a full four years. Kloor argues that, were Bt cotton truly the cause of the farmer suicide event, then it would not have been adopted by 90% of Indian cotton farmers since its approval. Kloor further attempts to confirm his analysis by pointing out that Bt cotton is similarly popular in China, having increased annual average cotton crops by 2.1 million tons since adoption.

Instead of Bt cotton, Kloor argues, the cause of the farmer suicide event can actually be identified in regressive economic and agricultural policy in India which limits governmental support for farmers, and caused many to seek out private loans, leading to massive debt and widespread financial instability amongst Indian cotton farmers. As if to confirm at least part of this hypothesis, Gruère and Sengupta (2011) note that suicide rates have not increased with the increased adoption of Bt cotton in India. While Stone does not agree with Kloor that lending policies in India are at the heart of the farmer suicide event, he does note that the most likely cause of financial difficulty for Indian cotton farmers was their expensive dependence on pesticide intensive cotton crops in the 1990s (Stone, 2014). While this observation seems as though it would vindicate Shiva and other anti-GMO activists, their opponents point out that the proliferation of GMOs will eventually result in the reduction or potential elimination of many of the costly and environmentally damaging products produced by the biotechnology industry, whether they be herbicides or pesticides (Kloor, 2014; Saletan, 2015a; Stone, 2014).

Anoop Sadanandan (2014) approached the issue of India's farmer suicides from an econometric perspective which sought to identify the primary causes of the increased suicide rate. He found that "the increase in suicides among Indian farmers is an unanticipated consequence of the bank reforms the country undertook since the early 1990s" (p. 290). As foreign and newly-established private banks became more and more prevalent in India in the

1990s, the pre-existing finance sector within India took on a process of sweeping reforms, with the aim of the reforms being increased competitiveness for established Indian banks. The increase in competition lead to a culling process by which banks in India began to evaluate their investments based upon profitability. Ultimately, many concluded that lending to farmers produced little return on investment. With the credit well drying up, Indian farmers turned to private moneylenders to keep their farms running. This dependence upon private loans, with their comparatively high interest rates and comparatively low level of concern for debtors, ultimately lead to high rates of inescapable indebtedness. Driving the agrarian suicide rate up. Importantly, Sadanandan notes, the suicide rate increase was most prevalent in five of twenty-eight states, "particularly, in states where banking became more competitive with the increased presence of foreign and private banks" (p. 291).

Nobody really questions that Indian farmers began committing suicide at an increased rate starting in 1995. It is a statistical fact (Fernandez, 2012; Kloor, 2014; Overdorf, 2012; Sadanandan, 2014; Shiva, 2009; Shiva, 2013; Stone, 2014). What is strongly contested, however, is causality. Shiva and other anti-GMO activists maintain in no uncertain terms that the suicides were caused by Monsanto's introduction of GM seeds. Kloor, Sadanandan, and others argue that the primary problem was connected to India's financial system. Surely, finding an accurate answer to the question of causality matters. If the living conditions of India's farmers are to be improved, then we should do whatever is necessary to identify the structural and proximal causes of those suicides, and make policy changes to attempt to curb the suffering. Unfortunately, it is neither my intention, nor is it within my capacity, to answer the causal question. What I am interested in, however, is the way in which the farmer suicides have been interjected into anti-GMO advocacy, and the purpose that the suicides serve therein.

THEORY: THE RHETORICAL SITUATION

Cox & Pezzullo (2016) state that a rhetorical situation consists of three necessary components: (1) exigency, a set of conditions that have been constituted as a 'problem,' grievance, or crisis that becomes marked by a sense of urgency; (2) audience, the people being addressed, their beliefs, actions, and larger cultural understandings; and (3) constraints, the cultural limitations and possibilities of the context (pp. 57-58).

Here I'll use global climate change as an example. The exigency is the drastic alteration of the global climate in such a way that it interrupts daily life and global order, the audience is the general public, and constraints are defined by the capacity of an audience to act to change the course of the exigency in question (Bitzer, 1968). For my purposes in constructing the farmer suicides as a symbolic component of a rhetorical situation, a larger articulation of what makes a rhetorical situation is necessary.

> Lloyd Bitzer (1968) defines a rhetorical situation as:
>
> a complex of persons, events, objects, and relations presenting an actual or potential exigence which can be completely or partially removed if discourse, introduced into the situation, can so constrain human decision or action as to bring about the significant modification of the exigence (p. 6).

So, we might understand climate change as a rhetorical situation by pressing for governmental action by way of progressive and successful rhetorical discourse, a set of policy changes might come about to alter the alter the potential negative outcomes of a global climate crisis.

Lloyd Bitzer (1968), as the originator of modern thought on rhetorical situation, expands on the basic constituent nature of the rhetorical situation provided by Cox & Pezzullo (2016). "An exigence," he writes, "is rhetorical when it is capable of positive modification and when

positive modification requires discourse or can be assisted by discourse" (p. 7). This means that not all exigencies or crises are rhetorical: an all-consuming fate, to the extent that some irreversible fate is possible, would not be a rhetorical exigence, because there is no hope that discourse may alter the course of those impacted by the exigence. Bitzer specifically centers environmental concerns as rhetorical exigencies, writing that "The pollution of our air is also a rhetorical exigence because its positive modification—reduction of pollution—strongly invites the assistance of discourse producing public awareness, indignation, and action of the right kind." (p. 7).

In addition to Cox & Pezzullo's (2016) basic definition of audience as "the people being addressed, their beliefs, actions, and larger cultural understandings" (p. 58), Bitzer (1968) clarifies that "a rhetorical audience consists only of those persons who are capable of being influenced by discourse and of being mediators of change" (p. 8). So again, in the case of climate change, the gut reaction might be for the receiver of a message to declare in frustration "I cannot do anything about it!". In a direct sense, that the individual could not do enough to decrease the rate at which the climate changes, that is true. However, and importantly for the larger topic of climate change, or the farmer suicides and the GMO debate which they inhabit, in a heavily globalized world defined largely be democratic liberalism and global-neoliberalism as governing frameworks, any individual political subject has the potential to create change through activism, and by making demands on a supposedly democratic superstructure.

Finally, Bitzer (1968) expands on Cox & Pezzullo's (2016) description of constraint, stating that constraints are "made up of persons, events, objects, and relations which are parts of the situation because they have the power to constrain decision and action needed to modify the exigence" (p. 8). So again, in the case of climate change we might understand the constraints of

the rhetorical situation as the cultural disinterest in taking action necessary to address the exigency, a presumed incapacity to make productive change, or the inevitability of global climate disaster.

One core problem with Bitzer's (1968) description of rhetorical situations is in his presumption that they are objective (Vatz, 1973). For example, when Bitzer (1968) asserts that "the situation *dictates* the sorts of observations to be made; it *dictates* the significant physical and verbal responses" (p. 5), he is asserting that rhetorical situations are driven by the objective facts of the situation. Vatz (1973), however, asserts that the number of different contexts which can be used to describe an exigence or rhetorical situation are inexhaustible. Instead, rather than being driven by objectivity and facticity, he argues that "the facts or events communicated to us are *choices*, by our sources of information" (p. 156). He continues, "The very choice of what facts or events are relevant is a matter of pure arbitration" (p. 157). Because the choices rhetors make about what kinds of information they articulate in their rhetoric, we come to understand that rhetoric does not simply exist within the confines of a discrete rhetorical situation, but rather rhetoric also defines the way that a listening public understands the rhetorical situation. The arbitrary choices (Vatz, 1973) rhetors make about which information to include in constructing a situation for public consumption serve create the rhetorical situation. That is, that the rhetoric surrounding the rhetorical situation and the rhetorical situation itself are co-constitutive.

The rhetorical importance of Vatz's (1973) critique of Bitzer's (1968) definition of the rhetorical situation is this:

> There are critical academic and moral consequences for rhetorical study according to one's view of meaning. If you view meaning as intrinsic to situations, rhetorical study becomes parasitic to philosophy, political science, and whatever other

> discipline can inform us as to what the "real" situation is. If, on the other hand, you view meaning as a consequence of rhetorical creation, your paramount concern will be how and by whom symbols create the reality to which people react. In a world of inexhaustible and ambiguous events, facts, images, and symbols, the rhetorician can best account for choices of situations, the evocative symbols, and the forms and media which transmit these translations of meaning (Vatz, 1973, pp. 157-158).

For the rhetorical critic, Vatz (1973) would argue that what is important is not the notion that a situation invites rhetoric, but rather that rhetoric invites and controls situation. Put explicitly, "rhetoric is a cause not an *effect* of meaning" (Vatz, 1973, p. 160). This realization gestures towards questions of rhetorical framing, which are explored in more depth later in this paper.

While Vatz (1973) seems to dismiss the idea of the rhetorical situation in its entirety, I am not so comfortable throwing the baby out with the bathwater. It is certainly worth uncovering the "operation responsible for the hierarchization" (Biesecker, 1989, p. 115), and examining the tension between the idea of rhetoric as necessitated by a situation, and rhetoric as creating a situation, because it expands the scope of what we consider possible because of rhetoric. But the impasse implied by Vatz (1973) does not have to mean the death of the rhetorical situation, it simply means we must view a rhetorical situation reflexively and critically. Given my previous statement that nobody denies the facticity of the jump in the suicide rate amongst India's farmers, there is clearly some exigence which can be derived from viewing a statistical anomaly. But, given the critique of rhetorical situations as constructed, at least partially, arbitrarily, we must

also evaluate the way that the exigence is packaged and articulated. Those arbitrary choices are part of what defines an exigence's role in a particular, dueling set of rhetorical situations.

ANALYSIS: THE FARMER SUICIDES AS A RHETORICAL SITUATION

"The people in the fight of our lives/the spark of revolution in a farmer's suicide" (Geever, 2006)

Since 1995, between 200,000 and 300,000 Indian farmers have committed suicide (Fernandez, 2012; Gruère & Sengupta, 2011; Kloor, 2014; Overdorf, 2012; Shiva, 2009; Shiva, 2013; Stone, 2014). While the knowledge that these suicides took place is not in doubt, the nature of the circumstances surrounding those suicides is hotly debated. I term this period and this set of suicides part of a larger farmer suicide event. This is not to say that they happened as we might traditionally think of events as happening. They did not happen all at once, or all in one place, but rather occur as a series of individual events connected by their shared place, their shared timeline, and their presumed-shared cause.

I think I was first introduced to the farmer suicide event by the Anti-Flag song "The W.T.O. Kills Farmers" from the album *For Blood and Empire*. It was a loud and ostentatiously political song on a record full of loud, ostentatiously political songs. I enjoyed the record. While there is no accounting for the taste of the average seventeen-year-old, the record itself was easy to identify for what it was—a political screed. The political intention of an album with songs titled "The press corpse," "Confessions of an economic hit man," "War sucks, let's party!," "The W.T.O. kills farmers," and "Depleted uranium is a war crime" (Schiffman, 2006) is difficult to misconstrue. Lines like "Stand up! Resist!/Monsanto are killers, k-k-k-k-killers!" (Geever, 2006) clearly articulate a political call to arms, attempting to motivate the listener base into public action against a particular set of political enemies.

While the song and album from which it came never motivated me into any particular political entanglement, the words would stick in my head. Any time I read about the farmer suicides alluded to in the song, or any time I read about Monsanto, that line would play on-and-

on in my head ad nauseam. Though I did not know it at the time, the implantation of this particular unshakeable meme—"Monsanto are killers!"—was but one way in which a particular rhetorical situation was being constructed for my burgeoning political consciousness. To be clear, while a traditional understanding of the rhetorical situation would likely imply a time sensitive specific event, it is my position that our understanding of a rhetorical situation should be stretched to more fully encompass the nature of argument construction surrounding a particular rhetorical issue. Years later, as I sit in my home office reflecting on this particular musical encounter, I have both more knowledge about the subject of the song and its general politics, and, finally, the vocabulary with which to describe those politics; to situate them within a particular communicative context.

Regardless of which version of the farmer suicide event is most correct, the event itself serves as a powerful symbol. It combines anxieties about food insecurity, neoliberalism, colonialism, biodiversity, and technology run amok with a powerful idea. It is pathos given form: suicide conjures powerful emotions at an individual and group level. The weak, poor, and hungry are laid to waste by the powerful, rich, and violent. More than anything, the disparate conclusions reached about the cause of the event itself articulate something important about our relationship to global goings on and our consumption of that information: the framing of an event defines our understanding of that event, and the rhetorical situation which it births. In both pro- and anti-GMO versions of the farmer suicide event, the basic facts are the same: hundreds of thousands of Indian farmers committed suicide, and they did so for a reason. The disagreement surrounding those reasons is what splits the competing accounts of the farmer suicide event: the exigencies are slightly different, the audiences which will receive these conflicting accounts will inevitably

have different values and priorities, and contextual possibilities are constrained by those values and priorities. This is compounded by methods of communicating the situation itself.

That the competing claims about the cause behind the farmer suicide event construct the event into dueling rhetorical situations cannot be denied. The relevant question for the rhetorical critic lies in evaluating the articulation of certain phenomena in particular political contexts. That GMO skeptics who write and speak about the farmer suicides isolate the rise of GMOs in India as the cause behind the suicides (Fernandez, 2012; Overdorf, 2012; Shiva, 2009; Shiva, 2013), and neglect the competing theory that the suicides were a result of failures in India's finance sector (Gruère & Sengupta, 2011; Kloor, 2014; Sadanandan, 2014; Saletan, 2015; Saletan, 2015a; Stone, 2014) certainly speaks to a certain level of arbitrariness in their construction of a rhetorical situation per Vatz (1973), it does not, in my view, entirely negate the value of describing those competing narratives as being components of rhetorical situation. The rhetorical situation is constructed based on frames, and points of disagreement within the context of a particular rhetorical exchange are constituent parts of how the larger issues for debate are framed.

THEORY: FRAMES & THE FRAMING CONTEST

According to Rodriguez and Asoro (2012), "framing theory…posits that the presentation of news events in the mass media can systematically affect how recipients of news come to understand these events" (p. 234). Importantly, "frames call attention to some aspects of reality while obscuring other elements, which might lead audiences to have different reactions" (Entman, 1993, p. 55). Though framing studies have become more prevalent, they have traditionally applied framing theory to textual analysis (Rodriguez & Dimitrova, 2011). However, visual representations are key parts of scientific discourse, and visual representations are ubiquitous in the public GMO debate (Rodriguez & Asoro, 2012).

The second-hand nature of most communication, especially the communication of current events, means that informational asymmetry and contextual confusion are inevitable. This problem is compounded by the prevalence of visual rhetoric in the GMO debate. The communication of a story is a translational process, whereby the language and framing used to describe an event are largely produced by the experience and perspective of the active communicator. The impact that framing has on public consciousness is magnified when we evaluate visual frames, because visuals are capable of overwhelming other representational forms (Rodriguez & Asoro, 2012).

This results in a type of "framing contest" (Gamson & Stuart, 1992), whereby different frames and methods of framing compete with one another for communicative power. Gamson and Stuart assert that, "symbolic contests are waged with metaphors, catch phrases, and other symbolic devices that mutually support an interpretive *package* for making sense of an ongoing stream of events as they relate to a particular issue" (p. 59). In such a contest, powerful and evocative ideas, descriptions, or images will often dominate those which are less common, less

visceral, or less culturally significant. Moreover, particular forms of media are granted more power based on their simplicity and packaging.

In this section, I describe the different frames given to the farmer suicide event. Moreover, I extend the farmer suicide event as a mass protest as an example of how visuals can be conjured up by the imagination of a story's recipient, and highlight some of Rodriguez and Asoro's analysis of visual images in communicating about GMOs.

ANALYSIS: FRAMES, IMAGES, AND THE FARMER SUICIDES AS AN IMAGE

I have previously mentioned that as a young and imaginative listener, Anti-Flag's representations of the farmer suicide event conjured up a mental image of hundreds of thousands of farmers collaborating in organizing and executing a mass suicide at the gates of a Monsanto or WTO office. Imagine it: 200,000-300,000 tired, poor, and exploited people drinking Monsanto manufactured pesticides and herbicides to kill themselves on Monsanto's doorstep in protest against Monsanto's dominance and suffocation of Indian agriculture.

As a brief digression, I should be clear that this account of the farmer suicides as some kind of mass protest is entirely invented by me, an audience member, situated in a particular socio-political context. The farmer suicide event did not take place. But the rhetoric utilized to communicate information and mobilize activists, and the cultural backdrop against which that information is brought to light produce a particular framing of the event as spectacle. For example, the question "Is it gonna take a martyr to end the charade?" (Geever, 2006) takes on a particular cultural meaning for audience members. Speaking only for myself, a modern day notion of martyrdom implies some level of spectacle. First and foremost, a martyr is "a person who is put to death or endures great suffering on behalf of any belief, principle, or cause" (Merriam-Webster). This word, martyr, has a particular cultural context which is used heavily to frame the song in the context of an album that deals largely with questions of power and politics in the era of the Global War on Terrorism. Martyrdom, in this context, implies spectacle. Suicide as martyrdom especially takes on the mantle of the spectacular: the suicide bomber creates a spectacle which informs our framing of struggle.

Similarly, the call to "stand up! Resist!" (Geever, 2006), in a song titled "The W.T.O. Kills Farmers" implies a move to mass political uprising. This is compounded again by our

modern social expectations. Resistance to the W.T.O., to the World Bank, to the I.M.F., or any number of liberal or neo-liberal political forces is understood in the context of historical resistance to those organs. Most immediately, I think of the mass protests against the W.T.O. in Seattle, or the mass protests which accompany most meetings of the G-8 or G-20 as defining what political opposition to these liberal and neo-liberal entities looks like. It looks like people in the streets, doing disobedience, and creating a spectacle. An image event. What is important for the rhetorical critic, again, is not the objective truth of an event, but the social context into which it is birthed, and the nature of audience response. For this audience member, at least, the language and social context of this presentation of the farmer suicide event conjure up these powerful, culturally informed images. So, if one of our core questions is "how does a narrative impact its audience?" it was like this: spectacular.

DeLuca and Delicath (1999) would describe such an ambitious and powerful protest as an image event. Image events are "staged acts of protest designed for media dissemination" (DeLuca & Delicath, 1999, p. 244). Although an overview of the facts would indicate that, of course, such a protest did not take place, the power of that image is no less real. In a traditional sense, an image is a physical representation of an object or event, so the implication that a protest event which did not take place could also be an image event should be jarring. However, conceptualizing an image simply as a physical, visual representation unnecessarily constrains our capacity to analyze and discuss its meaning and context. Additionally, the presumption that a physical visual reproduction of an image event necessarily communicates some Truth or Fact is naïve and no longer an effective way of analyzing images. This, quite simply, is because of rapid advancements in our capacity to easily and convincingly edit images to represent something that "isn't real".

Seriously considering these imagined events as image events provides an additional layer to thinking about the impact of framing. Having already isolated that communicative frames play a substantial role in the mediation of information, the imagined event represents a way of thinking about how framing may play out at a cognitive level. The evaluation and analysis of an image (which technically does not exist) of an event (which technically did not occur) poses some obvious problems for communication scholars. Levels of imagination vary, and the different texture that each individual will bring to their imag(e/ined) event make comparative analysis difficult if not impossible.

I would argue, however, that such problems are inevitable: interpretive analytics are always interpretive, and no two scholars will ever see the exact same idea communicated by a static visual representation. This type of individualized approach to understanding imag(e/ined) events serves to highlight the importance of framing. An idea communicated to a receiver will always be communicated imperfectly, because perception, experience, and predilection will always influence the individuated response of that receiver. The intent of the author will *always* be either lost, or negotiated by the perspective of the receiver, but framing establishes a baseline of understanding and context which the author can use to clarify intent. In this instance, it seems to me that Anti-Flag framed their representation of the farmer suicide event in a frame which attempted to communicate political discontent, protest, and social justice by evoking the inhumanity of hundreds of thousands of related suicides.

The way that the farmer suicide event is framed by other activists has similar implications for the political meaning of a particular message. In the narratives offered by Shiva and her allies, the issue is framed very simply: GMOs are a product of powerful corporate interests. Those corporate entities seek to monopolize global agriculture, destroy our biodiversity, undermine the

economic power of the Global South, and pervert nature. Kloor, Monsanto, and others of their persuasion instead frame the issue as a question of ignorance and policy failures, while trumpeting the power of the science behind their work, and asserting their good intentions by promising to "feed the world".

Beyond differing accounts of the farmer suicide event, public communications surrounding GMOs are often dominated by online visual media (Rodriguez & Asoro, 2012). Given the capacity of images to frame other components of communication and whole issues for public debate, the nature and framing of the images themselves is of incredible importance. In their analysis of online visual media, Rodriguez and Asoro found that the majority of images were anti-GMO or anti-Monsanto. Generally, images meant to depict the effects of GMOs use two common tropes: the syringe, and the "frankenfood" (2012).

The images which I would categorize under the "trope of the syringe" all purport to show the process by which organisms are genetically modified: they are stuck with a syringe and some strange lab-manufactured chemical is injected into otherwise "normal" food. The image of the syringe is a powerful one for most, I suspect. Getting injected with a syringe is physically unpleasant, syringes are powerful symbols of chemical manipulation and, in some contexts (i.e., heroin abuse) social and individual degradation. Furthermore, the implication that GMOs are produced by way of a harmful and unnatural penetration may be unsettling, especially given ecofeminist discourses which compare the role of women and the role of "the environment" in a patriarchal society. These images have the potential to evoke powerful, visceral responses from consumers. Moreover, the strength of those visual representations, combined with the conclusion that "more than half of the images examined (51.8%) inaccurately portrayed the topic" (Rodriguez & Asoro, 2012, p. 238).

The second trope which emerges from the work of Rodriguez and Asoro is that of abnormality. This trope is composed of a collection of images which purport to show the disastrous, horrifying, and unnatural implications of genetic engineering. An image of an aggressive snake-banana hybrid evokes the notion that your genetically engineered food is dangerous, poisonous, and defies the natural order of things. These images, and much of the larger academic and public discourse surrounding GMOs point to the emergence of two powerful, controlling narrative ideas: nature, and technology. These two primary framing concepts serve as the ideographs of <nature> and <technology>.

THEORY: IDEOGRAPHS

Initially conceptualized by Michael McGee (1980), ideographs are "culturally-grounded, summarizing, and authoritative terms that enact their meaning by expressing an association of cultural ideals and experiences in an ever-evolving and reifying form within the rhetorical environment" (Edwards & Winkler, 2008, p. 125). Palczewski (2006) notes that ideographs create a political language which both defers to and strengthens itself. Whereas McGee maintained that ideographs must be verbal slogans Edwards and Winkler maintain that ideographs may be "visual slogans" (Edwards & Winkler, 2008; Palczewski, 2006).

Ideographs serve to constrain discourse by creating definitive ideological meanings and relationships. Walts (2006) writes that ideographs "result in a matrix of social control solely based on discourse" (p. 48). By assigning particular cultural meaning and power to a slogan or idea, ideographs emerge. Those ideographs, rooted in a particular culture, carry particular meanings to individuals within that culture, and provide ideological definition and guidance to particular localizations of discourse. Importantly, ideographs are culturally accessible. They are designed for consumption by the masses, not the political elite (Edwards & Winkler, 2008). However, not all words can become an ideograph. Rather, slogans become ideographs only as perception of their meaning reaches absolutism, helping to fuel their own ideologies (Walts, 2006).

For his part, McGee (1980), argues that "social control in its essence is control over consciousness, the a priori influence that learned predispositions hold over human agents" (p. 6). This means that ideographs, socially constructed markers of particular socialized ideologies work first and foremost as framing devices. They are wholly dependent upon social ideas. For example, "When a claim is warranted by such terms as 'law,' 'liberty,' 'tyranny,' or 'trial by

jury,' in other words it is presumed that human beings will react predictably and autonomically. (McGee, 1980, p. 6). Ideographic terms "are more pregnant than propositions ever could be" (McGee, 1980, p. 7). For example, McGee argues that the ideograph <rule of law> "is the series of propositions, all of them, that could be manufactured to justify a Whig/Liberal order" (McGee, 1980, p. 7).

So, if we take the idea of nature as an example, creating the infograph of <nature>, we are mobilized at once by the collective idea of <nature>, itself composed of a near infinite series of propositions of what constitutes <nature>. The ideograph itself utilizes a subtle form of social control which, in some sense, homogenizes all the extant, often contradictory propositions about nature which excites action and occludes examination and revelation. We are mobilized by the idea of <nature> to protect whatever nature, in this instance, is thought to encompass. In simpler form, the ideograph is a God term. "Language," McGee (1980) writes, "gets in the way of thinking, separates us from 'ideas' we may have which cannot be surely expressed, even to ourselves, in the usages which imprison us" (p. 9). There are contradictions within <nature> that we can barely begin to comprehend or articulate, yet the use of the language of <nature> in a rhetorical context activates our predispositions anyway.

In the same way that ideographs can be used as a proactive form of mobilizing a populace to respond to the controlling ideas we have about those ideographs and their place in society, I would argue that ideographs can also be established in the negative, with the right rhetorical framing. This establishes an arena whereby two competing ideographs, one good, one bad, can be mobilized to incite a particular response. In the same way that I have described the ideograph as a God term, ideographs could also be understood as Devil terms.

In the following section, I argue one of the core features of the GMO debate is the dichotomized use of ideographs by debate participants. In particular, I isolate that GMO skeptics have established the centrality of the ideographs <nature> and <technology> in popular discourse surrounding GMOs.

ANALYSIS: IDEOGRAPHS

I have previously argued that the heart of the debate regarding GMOs is focused on pitting the natural against the unnatural. A key preoccupation of GMO skeptics is concern for biodiversity, and opposition to the unnatural modification of organisms for the purposes of techno-capitalist exploitation (Rodriguez & Asoro, 2012; Saletan, 2015; Saletan, 2015a; Shiva, 2009; Shiva, 2013). As idological literaure surrounding these concerns approaches a critical mass of saturation and fidelity, then the core concepts of those ideologies become reified as ideographs.

Where Saletan (2015; 2015a) makes the point that GMO skeptics are preoccupied with traditional, unadulterated understandings of nature most clearly is in his description of the evolution of agricultural utilization of the bacteria *Bacillus thuringiensis*. Initially discovered as a naturally occuring bacteria, *Bacillus thuringiensis*—the bacteria from which products like Bt cotton and Bt maize get their name—scientists discovered that Bacillus thuingiensis was an effective way to kill pests, while being harmless to plants and vertebrates, and "farmers and environmentalists loved it" (2015). In the 1980s, researchers developed a technique to produce GMOs which combine *Bacillus thuringiensis* with the genetic code of tomatoes, creating Bt tomatoes. It was at that point, Saletan maintains, that environmentalists turned on *Bacillus thuringiensis*. "What upset them," he says, "wasn't the insecticide but the genetic engineering" (2015).

Assuming Saletan's version of events is accurate—which is admittedly not a guarantee—then it points to the blossoming of a powerful new ideograph in the fight over GMOs: <nature>. Even if Saletan is not entirely correct, the known GMO-skeptic concerns about the potential perversion of the natural order suggest that his conclusions on the subject are likely accurate. The

GMO-skeptic's concern for biodiversity is a core component of the grounding of <nature> as an ideograph. This is perhaps best demonstrated by the ways that concern for the preservation of biodiversity have impacted the policy debate surrounding the proper methods for testing and regulating GMOs.

Previously cited literature concerning the development of a common framework for understanding environmental protection isolates that the primary concern in environmental risk assessment is the impact that an activity may have on biodiversity (Sanvido, et al., 2012; Shiva, 2009; Shiva, 2013; Wangalachi, et al., 2011; Vogel, 2014). In this way, concern for biodiversity, a *naturally occurring* biodiversity gives shape to the ideograph of <nature>. But the true power of <nature> as an ideograph is best embodied by the tropes utilized in the visual media studied by Rodriguez and Asoro (2012). "Natural" or organic organisms are ideal, as God made them. They are set against the frankenfoods created by human use of <technology> to pervert nature. The establishment, intentional or unintentional, or these ideographs by GMO-skeptics has powerful definitive and ideological implications. The images classified by the "syringe trope" are an example of this perversion in action. The visceral response evoked by the images of a needle *poisoning* an organism helps to define GMOs as a perverse <technology> that violates the basic fundamentals of <nature>. The implications for this dangerous perversion of nature with technology are effectively communicated by the horribly unnatural GMOs produced by this process. Perverting <nature> with <technology> yields a banana which bites and kills you (Rodriguez & Asoro, 2012). The power of these concepts as ideographs is reified by the evocative framing power afforded to visual artifacts (Rodriguez & Asoro, 2012).

Extending the example of the farmer suicides, the competing ideographs of <nature> and <technology> can be found in the way that GMO-skeptics who use the farmer suicides as a

central rhetorical device articulate their understanding of the causal relationship between GMOs and the suicides. Bt cotton seeds, for example, are articulated as “seeds of suicide” (2009; 2013). These “seeds of suicide” are, for skeptics, literally the cause of the farmer suicides, while also representing the idea that GMOs represent a seed of global suicide, by threatening our natural biodiversity (Shiva, 2013). They are set against “seeds of hope” (Shiva, 2009). The sides and stakes here should be clear. Terminator seeds, “seeds of suicide,” generated by <technology> represent the unraveling of <nature> and existence as we know them. “Seeds of hope” meanwhile, are from <nature>. They imply a correct natural order of things. They represent growth and prosperity. It is here that the stakes of the debate are set. The use of GMOs, the use of <technology> to alter <nature> puts nature at risk. These notions of risk pervade our political framework for evaluating environmental policy: the protection of biodiversity, a key part of <nature> is of pinnacle importance to policymakers and environmental activists (Sanvido, et al., 2012; Shiva, 2009; Shiva, 2013; Wangalachi, et al., 2011; Vogel, 2014).

CONCLUSION

The emergence of transgenic technologies in the late 20th century has created new questions for environmental activists, policymakers, farmers, scientists, bioethicists, consumers, voters, and communication scholars. These technologies have incredible implications for global food security, foreign policy, economic policy, environmental policy across the globe. The debate is far from settled, and new technological and philosophical developments will continue to push the GMO debate in new directions and raise new questions for all concerned with the potentially benevolent or malignant implications of the proliferations of GMOs.

In this essay, I have tracked the evolution of the global GMO debate from a rhetorical perspective. Starting from the farmer suicide event, I have used communicative concepts including rhetorical situations, frames, and ideographs to arrive at the nature of the argument. I argue that preoccupations with biodiversity and <nature> have established powerful frames for communicating the dangers of GMOs. The primary theories I have used seemed to grow organically out of my research into the GMO debate, particularly as that debate is encapsulated in the context of the farmer suicide event. The suicides as an event seemed to speak to so many cultural anxieties surrounding GMOs, neoliberalism, and corporate agriculture. Monopolized seed production, the death of the global-underclass, and the corruption of nature and our crops all animate us to action. Concerns for social justice, for the sanctity of nature, and for the continued existence of the world as we know it are all tied up in where our food comes from, and whether there will be enough to go around. The explicit call to action, motivated by a readily recognized exigent circumstance clearly articulated the farmer suicides as part of a larger rhetorical situation surrounding GMOs. However, the causal and factual disputes identified by the debates over the nature of the suicide event, and GMOs more generally implied that the rhetorical situation, as

communicated, was not objective. This realization marked an important turning point for how my review of the debate would play out. Given that competing, but very closely connected rhetorical situations arose out of basically the same set of facts implied that, per Vatz (1973), there was very little about the larger rhetorical terrain that was objective. Instead it became clear that oft-cited rhetors on the issue were working from similar sets of facts, but reaching different conclusions. This necessarily meant that my chief concern was not objective materiality—the facts of the case—but was instead about symbolic contestation, driven by the way that rhetors attempted to frame a generally shared set of information.

Given present concern for the establishment of common risk assessment frameworks (Kvakkestad & Vatn, 2010; Lundquist, 2015; Sanvido, et al., 2012), informed by philosophical presumptions about what is *at risk*, and the desire of some scientists to better articulate their positions (Glover, 2010; Solli, Bach, & Åkerman, 2014; Wangalachi, et al., 2011), communication scholars are uniquely situated to analyze and influence the ongoing public discourse surrounding GMOs. Our position as generalists concerned with the methods by which knowledge is collaboratively produced and spread situates us in such a way as to work to establish *communicative* frameworks which may help bridge the scientist/non-scientist devide (Solli, Bach, & Åkerman, 2014). Investigating the symbolic contestation of GMO related issues also enables us to more clearly confront our own biases. While I am certainly resistent to most anti-GMO rhetoric, exploration of that rhetoric at a number of levels helps to clarify what those positions mean. Moreover, communication scholars have a unique opportunity to deconstruct the methods by which ideas are communicated by GMO skeptics and advocates alike to find the philosophical concerns underwriting public GMO discourse, and reach a fuller understanding of the methods by which we ascribe social value to particular features, ideas, and bodies.

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Genetically Modified Organisms, India's Farmer Suicide Event, and Environmental Discourse: Rhetorical Situations, Frames, and Ideographs in the Debate on Genetically Modified Organisms

Major Professor: Jonathan M. Gray