

# In Truth We Trust: Discourse, Phenomenology, and the Social Relations of Knowledge in an Environmental Dispute

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## ABSTRACT

In this age of debate it is not news that what constitutes ‘truth’ is often at issue in environmental debates. But what is often missed is an insight that the speakers of Middle English understood a millennium ago: that truth comes from trust, which, is the central theoretical position of this paper. Our point is that truth depends essentially on social relations – relations that involve power and knowledge, to be sure, but also identity. Thus, challenges to what constitutes the ‘truth’ are equally challenges to identities and the social networks of trust in which that truth is embedded. We therefore attempt to move beyond Foucaultian discursive theory by reintroducing the subject as both the product and producer of discourse. For Foucault, the subject is reduced to the discursive relations of power/knowledge. In his effort to free us from the Cartesian *cogito* and the modernist absolutisms that eventually followed, Foucault lapses into a kind of postmodern functionalism. We argue that we should not speak of power/knowledge, as Foucault suggested, but of *power/knowledge/identity*, recovering the actors and concrete social relations that produce discourse, and are not only produced by it. We then argue that these social relations become constituted (and reconstituted) in particular moments of *phenomenological challenge* – discursive moments that confront the existing social relations of knowledge and their

dialogue of trust and truth. We illustrate the implications of a threat to the social relations of environmental knowledge through an analysis of one such moment of phenomenological challenge: a dispute over whether or not the power plant in the community where we used to live, Ames, Iowa, is producing dioxin.

### KEY WORDS

Truth, trust, power, knowledge, discourse

### INTRODUCTION

In this age of contestation – of, depending on one’s theoretical predilections, reflexivity and postmodernism – it is not news that what constitutes ‘truth’ is often at issue in environmental debates. Social movements, scientists, states, intellectuals, concerned citizens and more all clamour for their discursive place in the public sphere, constructing and deconstructing the ‘truth’ of dioxin, BSE, GMOs, global warming and other environmental issues.

Yet contesting ‘truth’ also implies an active challenge to the social networks in which ‘trust’ is embedded. Such an insight, although often missed by us moderns, is implicit in the history of our language: that truth comes from trust. Etymologically, truth (from the Old English *treowth*) and trust (from the Old Norse *traust*) have different origins. But in terms of the history of meaning, truth came from trust. *Treowth* meant fidelity, constancy, loyalty, the underpinnings of what we now call ‘trust’. During the Middle English period, between the twelfth and early sixteenth centuries, alongside this older meaning developed the parallel and ultimately dominant sense of factual correctness, which became our ‘truth’. The adjective related to *treowth* was *treowe*, the Old English word for ‘faithful’ and ‘trustworthy’, which also carried a sense of ‘true’.<sup>1</sup> We still use ‘true’ in this way: a trustworthy person is true to his or her word; a faithful person is ‘true’ to his or her group or cause. A person who is ‘true’ is a person we can ‘trust’.

That truth comes from trust, and that trust in turn comes from truth, is the central theoretical position of this paper – a position that we base in part on the notion of the *social relations of knowledge* described by Bell and colleagues (in press). The central point in Bell and colleagues is that truth depends essentially upon social relations – relations that involve power and knowledge, to be sure, but also identity – and that challenges to what constitutes the ‘truth’ are equally challenges to the social networks in which the ‘truth’ is embedded. Thus, we should not speak of power/knowledge, as Foucault suggested, but of *power/knowledge/identity*, recovering the actors and concrete social relations that produce discourse, and are not only produced by it.

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In this paper we develop that analysis with a sharper focus on the intertwined roles of discourse and phenomenology. Phenomenologists have long noted the importance of ‘trust’ in the taken-for-granted character of most of social life, as in the trust-breaking experiments of Garfinkel. But the loss of trust in those experiments, as in much of phenomenology, was understood as an individual ontological problem, not a collective one. Phenomenologists have thus largely understood ‘trust’ as a metaphor for ontological issues. We believe the aptness that phenomenologists have found in this metaphor speaks to the implicit importance of the social character of our ontology. It is people that we trust, if we trust our ontology, not merely the ‘facts’ of our existence.

The creation of this social phenomenology of trust depends upon the play of discourse, constituting intersubjectivity within an on-going dialogue about ‘facts’ and ‘truth’ – what we call *superintersubjectivity*, after Carolan (2000). The very actors with which we seek to establish intersubjectivity – such as friends, environmental advocacy groups, scientists, even the state – must be discursively constituted in order that there be subjects to attempt intersubjectivity, or not.

We argue that these subjects of intersubjectivity and the social relations of knowledge that bind them to one degree or another, become constituted in particular moments of *phenomenological challenge* – discursive moments that confront the existing social relations of knowledge and their dialogue of trust and truth. Environmental knowledge is particularly prone to phenomenological challenge because, for all its apparent facticity, so much of it is of the unseen and superindividual. The environment, by its very definition, goes beyond any one of us, and thus beyond the experience of any one of us. The environment *is* the beyond, both spatially and temporally. Consequently, we must rely on social relations and their environmental knowledges to transcend these gaps and gulfs of space and time. To conclude we will illustrate the implications of a threat to the social relations of environmental knowledge through an analysis of one such moment of phenomenological challenge: a dispute over whether or not the power plant in the community where we used to live, Ames, Iowa, is producing dioxin.

## THE SOCIAL RELATIONS OF KNOWLEDGE

As creatures of the Enlightenment, we have been led to believe that knowledge – and therefore the truth – is something that exists ‘out there’. True knowledge is asocial, ahistorical, and amoral. It is objective. It is nature. It is real. And although we give knowledge and truth social life through our uncovering of it, we once again elevate it above the subjective through science and method.

Yet few of us totally believe this view today (if we ever did totally believe it). The Enlightenment is a ‘failed’ – or at best an incomplete – project, say many (i.e., Adorno, Habermas, Horkheimer, Sachs). Even among the staunchest

defenders of science, such as Sir Karl Popper (1962: 34), doubt has been expressed: 'all science rests upon shifting sand'. For most, knowledge has lost its innocence (if it ever had it). It *is* social, historical, and normative. Knowledge is therefore no longer necessarily Truth, we now commonly worry. Knowledge is us – it is based upon social relations. It is a thing of this world, produced by virtue of the multiple forms of social networks in which it is embedded. And if knowledge is a thing of this world, then perhaps truth is as well. Foucault reminded us of this, but we have always retained at least some degree of suspicion that every new Wizard of Oz is just a little man (or woman) behind a curtain of words.

Challenging the wizard, though, means challenging the social order of the wizard, as Dorothy discovered. Institutions, universities, the state, scientists, and environmental advocates all must engage in *discursive challenges to social relations* to establish something as 'true' or not 'true'. This is not easy: social relations are also relations of social interests. Therefore when we speak to knowledge we must also speak to power. Knowledge and power 'directly imply one another', Foucault (1979 [1975]: 27) astutely observed. 'There is no power relation without the correlative constitution of a field of knowledge, nor any knowledge that does not presuppose and constitute at the same time power relations' (Foucault 1979 [1975]: 27). Like Thomas Kuhn (1962), Foucault argues that 'truth' is context specific; it emerges from specific discourse or from specific paradigmatic communities. According to Foucault, there are only 'games of truth', not absolute truth. Truth and knowledge are not outside of power, therefore, or lacking of power; they are discursive products of power. Understanding the power relations of knowledge can also gain us a view of what Foucault (1979: 82) termed 'subjugated knowledges' (or, more accurately, subjugated non-knowledges): those knowledges that have been disqualified as being inadequate, naïve, and lacking scientificity. As well, it gives a view of the discursive actions that are taken when one social network subjugates the knowledge of another.

These insights about the interrelations of knowledge and power are, by now, postmodern commonplaces, and widely accepted outside the realms of postmodernism, as we have been trying to argue. We also agree, in the main, with these common postmodernisms about knowledge's interrelations with power. But we would like to suggest something more: that these interrelations also centrally involve identities. When theorists speak of power/knowledge, as suggested by Foucault, they should equally work toward recovering the discursively constituted and constituting subjects of power/knowledge. To put it more simply, when one asks *what* power/knowledge one should likewise be asking *whose* power/knowledge.

Indeed, 'whose' is generally the first question one asks of knowledge: Is this the knowledge of scientists, of local people, of environmentalists, of religious

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fundamentalists, or something one learned for oneself? Much of what we know, probably most of what we know, is known by others. As Mikhail Bakhtin (1993) observed, knowledge is intersubjectively and dialogically constituted. We do not all know the same thing, however. Knowledge is created through difference, just as different knowledges create different identities. By connecting ourselves to knowledge, we connect ourselves to its history, and the social present and social future that it implies. But likewise, and in the same action, we disconnect ourselves from other alternative histories, and their social presents and social futures. Knowledge creates social affiliation, as well as social disaffiliation. The relations of knowledge identities constitute us as we constitute them. Thus, who we are depends on what we know, and who we know depends on what we are. Knowledge and identity therefore connect as knowledge/identity just as power and knowledge connect as power/knowledge.

This is not to say that Foucault's work is theoretically void on identity, particularly his later work. For instance, Foucault (1986 [1984]) discusses at length his notion of the 'care of the self'. Yet this 'self' is largely an *intrapersonal* self, lacking social embeddedness – a point that becomes all the more exposed when he likens the 'care of the self' to the 'cultivation of the soul' (Foucault 1986 [1984]: 45). Put differently, for Foucault, the self is more a body than an identity. Foucault comes closer to what we mean with his notion of the 'technologies of self' – the specific practices by which selves constitute themselves as subjects within and through systems of power/knowledge, often seeming to be either 'natural' or imposed from above (Foucault 1986 [1984]). But these selves are the subjects of power/knowledge, indeed, even the *creations* of power/knowledge. And since for Foucault power/knowledge is a product of discourse, these subjects are in turn the products of discourse as well – the real fictions of the vagaries of the discursive world. In his effort to free us from the Cartesian *cogito* and the modernist absolutisms that eventually followed, Foucault lapses into a kind of postmodern functionalism. All is the product of discourse, but discourse itself is no product.

What is missing is agency, of course – but not agency in the sense of final cause. We do not want to swing from functionalism back to Aristotelianism. There is no unmoved mover. Rather, we mean agency as identity – as movers who are simultaneously constituted by that which they move and constitute. The problem with the words agency and agent is that they have come to carry the sense of a mover apart, of independent action. All social action is dependent, contextual, recursive. Rather than seeking final cause, we should seek to understand (and to contribute to) the *dialogics of cause*.

We suspect most sympathetic readers of Foucault have written identities and their dialogic agencies within, through, and over power/knowledge back into the story, at least tacitly. In this paper, we mean to do so explicitly with a more dialogic understanding of discourse as producing speaking selves, in all their

wondrous differences, and as being produced by them. If there is power/knowledge and knowledge/identity, then – although it is awkward to say – there must therefore be *power/knowledge/identity*.

We do not seek a total theory of knowledge, however, in calling for the recognition of the dialogic agency of knowledge identities in (again, that terrible term) *power/knowledge/identity*. If we are to embrace Foucault without the functionalism, we must also accept an openness and unpredictability to what is, in effect, the *dialogics of discourse*, lest we lapse into a new objectivism. The discursive and dialogic character of knowledge implies not only an intersubjective dimension to knowledge (and, as we will come to, a superintersubjective dimension) but a subjective quality as well. Intersubjectivity without subjectivity is a return to objectivity.

But to reject objectivity to avoid functionalism is not necessarily to throw ourselves on the opposite shoals of a relativistic postmodernism. Relativism yes, but our call is for a relativism that stimulates dialogic potential and the creativity of discourse by recognising difference as central to knowledge, rather than sending us each back to our individual caves because of it. And for that we must turn to the key proposition of this paper: that truth comes from trust and that trust in turn comes from truth.

### THE TRUTH WE TRUST

The importance of trust in social life cannot be understated. We live in a world influenced in an ever-increasing way by purposeful human efforts, where *fortuna* is being replaced by purposefulness. In the face of this great transformation, we have come to rest our faith more and more in ourselves, in each other's purposefulness. We trust not so much in God, or in the gods, but in our own knowledges and their social relations. Of course, knowledge of the gods was always a social relation as well, for it depended upon the priests, witches and diviners. But this was not our reflexive understanding, as it increasingly is today, even among the faithful, whose suspicion of purposefulness in church and doctrine increases with each new sexual and financial scandal.

Reflexive we may be about the social relations of purposefulness, but we nonetheless live in a world of the taken-for-granted. We have to. Life is too complex otherwise. Phenomenologists have long noted the importance of 'trust' in the taken-for-granted character of social life, as in the trust-breaking experiments of Garfinkel. Yet the loss of trust in those experiments, as in much of phenomenology, was (and still largely is) understood as an individual ontological problem, not a collective one.

Similarly individualistic ontological views continue in social theory today. The notion of 'ontological security', as espoused by Anthony Giddens (1979,

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1990), is perhaps one of the most obvious exemplars of such an ontological orientation. Giddens (1990) sees the ‘juggernaut’ of modernity, and its associated ‘risks’, as creating conditions that are ripe for possible individual ontological crises. How do I know that the world will not end today? How do I know that the person on the other end of an e-mail communiqué is really human? How do I know that my alarm clock will wake me in the morning? All these questions (as well as such purely existential questions as, ‘do I really exist?’), which are symptomatic of our modern juggernaut world, point directly to the possibility of an individual ontological crisis – where our very reality would come crashing down upon us were it not for a phenomenological trust in our ‘life-world’. Ontological security, according to Giddens (1990: 92), therefore ‘has to do with ‘being’ or, in the terms of phenomenology, ‘being-in-the-world’.’ Again, as with the ‘breaching experiments’ of Garfinkel, ontological trust for Giddens appears to be an individual problem, not a collective one.

Yet we believe there is a social character to our ontology. Phenomenologists have largely understood ‘trust’ as a metaphor for ontological issues. We believe the aptness that phenomenologists have found in this metaphor speaks to the implicit importance of the social character of our existence. Trusting our ontology presupposes trusting people, for it is people we trust, if we trust our ontology, not merely the ‘facts’ of existence.

This social phenomenology of trust is rooted in discourse.<sup>2</sup> Trust is intersubjectively and discursively constituted – this we are not disputing. Yet the actors we seek to establish intersubjectivity with – for instance, scientists, the state, environmental advocacy groups, enemies, or friends – must also be discursively constituted in order that there be subjects to attempt intersubjectivity, or not. The discursive constitution of actors, presupposed for intersubjectivity, is what we call *superintersubjectivity*. As social actors, we need others to be intersubjective with. And these subjects of intersubjectivity, and the social relations of knowledge that bind them or divide them, become constituted in particular moments of phenomenological challenge – discursive moments that confront the existing social relations of knowledge and their dialogue of trust and truth.

Niklas Luhmann (1979: 52) once made the astute observation ‘[t]rust is only possible where truth is possible....’ Our conveyance, or refusal, of trust is itself a product of truth. You may entrust a friend with a book, for example, perhaps because you believe her to be speaking the truth when she says, ‘I will return it to you tomorrow; you can trust me’, or perhaps because you believe others to be speaking the truth when they tell you she can be trusted. Indeed, one can easily speculate how utterly untrusting someone would be if they believed the human condition to be inherently one of deceptiveness and trickery.

But Luhmann (1979: 52) missed two further dimensions of the relationship between trust and truth, which we would like to bring out here. First, Luhmann

recognised only one half of the dialogical relationship between trust and truth. Yes, trust presupposes truth, but likewise, truth presupposes trust. As a social relation, could truth ever emerge from a discursive field that has been contaminated by doubt or suspicion? In order for something to be true, we must first trust the discursively constituted subjects that we establish intersubjectivity with. Trust, therefore, not only influences what we believe to be true or not, but also it is often trust, or the lack thereof, that determines whether we even attempt intersubjectivity or not. Trust, therefore, is an essential component of the social relations of knowledge. By connecting ourselves to knowledge and truth, we affirm our trust in that knowledge – and the discursive actors we establish intersubjectivity with. Trust thus requires truth, but likewise truth requires trust.

The second dimension we would like to highlight follows immediately from the first. In addition to truth leading to trust, and vice versa, truth also leads to *what* we trust – and vice versa. The relationship between trust and truth is, thus, both a matter of who and what. For example, by locating yourself within the social relations of postmodern thought you likewise locate yourself within its culture of trust and distrust. Thus, to certain degrees, you distrust science, grand-narratives, objective knowledge, etc. By the same token, locating yourself within social relations analogous to the tradition of positivism, you may find yourself distrusting subjectivity and emotions while trusting the scientific method and the epistemological supremacy of empiricism. The knowledge we attach ourselves to, then, not only gives us identity, but also locates us within a discursively constituted network of trust.

This is not to say that the social relations of knowledge and their dialogue of truth and trust are fixed. Just as knowledge is constituted dialogically and intersubjectively, so too is the network of trust that envelops us. The social relations of knowledge change and shift, often in a conflictual process that confronts monologic power and its efforts to limit change. We build coalitions; we engage in collective action; we speak up, together, in a loud voice. And if we are loud enough and cogent enough, the result is the aforementioned phenomenological challenge – a discursive moment where the existing social relations of knowledge become contested, resulting in the possibility of new social relations of truth, and thus new social relations of trust. How these ‘moments’ are handled and resolved can therefore lead to new patterns of power/knowledge/identity.

We shall now illustrate the implications of a threat to the social relations of environmental knowledge through an analysis of one such moment of phenomenological challenge: a dispute over whether or not the power plant in the community where we both lived until recently, Ames, Iowa, is producing dioxin.



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## THE DIOXIN CONTROVERSY IN AMES, IOWA

This dispute emerged in October of 2000 in response to the publication of a study from the North American Commission on Environmental Cooperation (NACEC), on which the lead author was the well-known environmentalist Barry Commoner (Commoner et al. 2000).<sup>3</sup> The 'Commoner report', as it came to be called in Ames, claimed that the high levels of dioxin found among the Inuit people of Nunavut, the new Canadian province, come primarily from just a few dozen sources in the United States, one of the ten most significant being the garbage-burning power plant in Ames, Iowa.<sup>4</sup> The story of the report first broke on October 3rd in the *Des Moines Register*, the daily paper in Iowa's largest city, some 30 miles from Ames. It reached the *Ames Tribune* the next day.

The power plant in Ames is a publicly-owned facility, set up in the late 1970s with the expertise of the engineering department of Iowa State University, which is also located in Ames. The charge levelled by the report thus called for an immediate response by public officials and university scientists. The response of both city officials and the local university engineering professors was vigorous and, perhaps predictably, defensive. The report was deemed 'bad science' in newspaper stories, in discussions before the local city council, and in personal conversations with officials and the public. As a member of the Ames City Council stated to one of us on the day after the story appeared in the *Ames Tribune*, 'our science is better than theirs'. A faculty member from the industrial engineering department used stronger language: 'The Barry Commoner report that our power plant is causing dioxin problems for the Inuits is flaky, discredited, and invalid.'<sup>5</sup>

The contention by the city and local scientists that the Commoner report represented 'bad' and 'flaky' science was based on two main arguments. First, they argued that the report used computer modelling of climate patterns, not actual samples from the Ames power plant. Second, they argued that although incinerators are frequently criticised as dioxin sources, the Ames plant uses an unusual method of incineration, a process called 'co-fuel' incineration.<sup>6</sup> Only ten percent of the fuel source for the plant is garbage; the rest is coal, raising the temperature of the combustion process to approximately 2800°F (1540°C). Supporters of the power plant argued that dioxins only form between 1200°F (650°C) and 1800°F (1000°C). Therefore, they initially claimed, dioxins cannot possibly be produced in the Ames plant.

Supporters also argued that the sulphur in the coal mitigates against dioxin formation and that there is relatively little plastic in the garbage burned at the plant, and thus little chlorine, an essential ingredient of dioxin. Supporters were further quick to argue that a 'co-fuel' power plant also greatly lessens the need for landfills, often describing the plant as using 'cutting-edge' technology that represents a potentially broader environmental solution. Finally, supporters cited a 1981 test of the plant which failed to detect any dioxin.

The Commoner report presented a different view, and Commoner himself made a number of local public statements about the report's findings, even visiting Ames twice after the release of the report. With regard to the argument by plant supporters concerning computer modelling, Commoner agreed that the report does not directly implicate the Ames power plant. However, the report is based on standardised models of power plant dioxin emissions, developed over many years by the national Environmental Protection Agency. The main work of the report is a new climate model, which indicates that a generous handful of US sites, including the Ames power plant, are the likely sources of the dioxin in Nunavut. Commoner also raised the findings of an earlier study he had led in the mid-1990s which, again based on climate modelling, suggested that the Ames power plant was a leading contributor to dioxin found in milk at four dairy farms in Iowa's neighbouring state of Wisconsin.

With regard to the second argument by plant proponents, Commoner argued in numerous public statements that the high temperature of combustion in Ames did not matter. Dioxin, Commoner said, can easily form after combustion in the power plant stack, during cool-down and as a result of the electrostatic precipitator in use at the Ames plant to reduce ash emissions. Also, Commoner claimed that there is sufficient chlorine in coal to create dioxins, and that the city's rather loose recycling efforts do little to remove plastic from the waste stream. Commoner further argued that the dioxin emissions tests conducted in 1981 used 'primitive, inadequate methods', citing recent technological advances in dioxin testing.<sup>7</sup> Commoner agreed that there is no direct evidence that the Ames power plant is producing dioxins. But he called on city officials to conduct a thorough dioxin test of the plant, using the latest methods, and testing the entire plant system, as well as checking for dioxin fallout in nearby fields. If dioxin were found, Commoner concluded that the only reasonable response would be to shut down the plant altogether and to use alternative sources of energy, such as the new wind power farms that have recently been established in the state (including one which is reputed to be among the world's largest).

For six months after the report was published, a debate in Ames focused on whether or not to test the plant. On one side were the city officials and local university engineering professors. On the other side were a loose and poorly organised group of local citizens, including a few professors from other departments in the university, one of whom is one of the authors of this paper: Bell. Probably the strongest local public voice in favour of the testing was the Ames Quality of Life Network, a local environmental group that is often at odds with the city government, and which Bell was also involved with. The Ames Quality of Life Network and others attempted to advance the argument of Commoner, receiving a significant boost when Commoner came to speak at the campus of Iowa State University in November 2000.

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Eventually, on 24 April 2001, the Ames City Council decided to hold off on a comprehensive dioxin test of the plant, citing its potential high cost. The Council did not rule out a test, and even chose a consulting firm to conduct it, should the decision to test be made. But the Council decided to commission an ‘engineering study’ of the plant first to determine if the test was necessary. The consulting firm was not asked to conduct the preliminary engineering study, however. Rather, the local university’s engineering professors were asked to do so.

The critics of the plant were hardly satisfied by this decision, which to them amounted to asking the fox to count the chickens to see if any had been taken. But in the view of the City and the engineering professors, the critics could not be satisfied anyway. Dioxin detection has become so good, they argued at the April 24th Council meeting (in something of a change of position), that some dioxin is sure to be detected, albeit likely at one-thousandth of the levels Commoner had suggested. If the City commissions a test, ‘the number will not be zero’, testified Robert Brown, Professor of Mechanical Engineering at Iowa State University (*Ames Tribune*, 25 April 2001). The *Ames Tribune* story further reported that

Brown cited an additional unresolved question if comprehensive testing were adopted – it would be expensive, if not impossible, to thoroughly satisfy the plant’s critics.

The city could test for dioxins in the furnace, the plant’s cooler, the stack and even perform plume studies to see if dioxin is formed in the atmosphere after smoke leaves the plant.

‘Plume studies could cost \$1 million’, Brown said. ‘And where do you test?’

Besides, as Bob Kindred, the Assistant City Manager of Ames, went on to testify, ‘Our uniqueness was not appreciated by this [the Commoner] study’, pointing again to Ames’ unusual ‘co-fuelling’ process designed by Iowa State’s engineers from Brown’s department. But, as the paper went on to report, Kindred ‘added that he wanted to reassure the community and said the city’s “only objective was finding out the truth”’.

The ‘truth’ that the City Council and Iowa State University engineering professors ultimately decided upon to trust was not the Commoner report, but rather the report of the Iowa State University engineering professor they had selected: Robert Brown, the same professor who had testified to the council in April. On June 26th, Professor Robert Brown presented his report to the City Council and citizens of Ames. In this report, Professor Brown criticised the Commoner report as containing ‘oversights and oversimplifications’ that resulted in a ‘grossly inaccurate’ estimate of the likely dioxin emissions from the Ames power plant (*Ames Tribune*, 25 June 2001).

Upon receiving this recommendation, on June 26th, the City Council unanimously decided against further testing for dioxin pollutants at the Ames municipal power plant, thus officially removing the dioxin debate from the City Council's agenda. At the time of this writing, it appears that no further action will be taken by the City toward testing for the possibility of dioxin emissions at the Ames power plant. It appears that the City has, in its view, fulfilled its only objective: 'finding out the truth'.

#### THE SOCIAL RELATIONS OF TRUTH AND TRUST IN AMES

*Finding out the truth.* The implication in the Assistant City Manager's remark is that truth depends on facts, the hoary positivist view. But in Ames the disagreement was not only about what the facts were, but which were the relevant facts worth looking for, and how to interpret them once they were gathered. Indeed, as the sociology of science has amply demonstrated from Kuhn to Feyerabend to Latour, this is generally the case. Facts have to be placed in an interpretive context which shapes *what* the facts are and *which* the facts are. Moreover, we argue, facts and interpretive contexts both necessarily depend upon ties of social affiliation and disaffiliation, particularly with regard to *the beyond* of the environment – and perhaps even more particularly with regard to environmental dioxin, which can not be seen, heard, smelled, or tasted. We need to trust others, and even the machines of others, to do this seeing, hearing, smelling, and tasting. Kindred argued that the City's commitment to truth would give the public 'reassurance' – trust, in the language we have been using. But it was equally trust and its social relations that largely determined the truth the City eventually found.

For many in Ames, the power plant represents much more than simply an instrument to provide cheap reliable energy. For many residents the power plant is a source of community pride. Ever since its construction during the 1970s energy crisis, the City and the university engineers have trumpeted their plant as a unique contribution of science in the service of public needs. The City and the university engineers take pride in the plant's 'co-fuel' principle of operation for lowering reliance on fossil fuels, as well as lowering the volume of material that has to be sent to landfills. And they take pride in the town-gown collaboration that led to its construction. The Ames power plant has, in a sense, become an overloaded signifier, inundated with social (and intrapersonal) meaning. For the City government and faculty members of the engineering department at Iowa State University it is an extension of themselves and their reputations – it is a part of their identity. Viewed in this light, it soon becomes clear why these aforementioned actors struggled to retain the current social relations of knowledge.

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Disturbing those social relations, thereby contesting what they believe as 'true', also contests their identity.

The social relations of knowledge in Ames, a college town economically dependent on its land-grant 'science and technology' university, are sewn through with a rather strong culture of trust toward science and technology – particularly toward the science and technology 'produced' within the university. Thus, to discursively challenge that science and technology is to contest the social relations within which it is embedded, and the actors which discursively constitute, and are constituted by, those relations. Consequently, 'whose' knowledge becomes as important as 'what' knowledge: is it the knowledge of Iowa State University scientists, of other scientists, of environmentalists, or some other group? 'Whose' knowledge one trusts will therefore greatly influence 'what' knowledge is accepted as the truth.

In making the aforementioned statement, 'our science is better than theirs', an Ames City Council member made explicit the 'whose' involved in the knowledge debate – the Iowa State engineering department versus the Commoner team. Yet with this remark, this City Council member also unknowingly made a very postmodern statement, one which we very much agree with: There can be multiple 'sciences', and thus knowledges. 'Whose' science you trust will (although we doubt the City Council member would actually go this far) ultimately determine which one represents the truth. And in arguing, 'our science is better than theirs', this City Council member was making a declaration of trust in 'our science', and through that trust in 'our science' was making the case for a particular vision of the truth.

It could be argued that the response of City government and the university engineers was simply defensiveness: that they saw their reputations being challenged, and therefore they were out to protect themselves. We suspect that there is in fact a good measure of simple interest involved in their response. But it was also possible that they could have understood the measure of their reputations as requiring a rapid decision to test the plant for dioxin. Indeed, this is precisely how the Ames Quality of Life Network envisioned the measure of the reputations of the City government and the university engineers. The fact that the City government and the university engineers did not see their reputations in this way indicated that they embed themselves in different networks of social honour. In other words, 'interest' was certainly an important factor in the response of all local actors to the dioxin controversy, including the Ames Quality of Life Network. But how local actors understood their interest was itself constituted through the same networks that constituted their sense of the 'truth'.

Additionally, one could suggest that more than accepting scientific interpretations from people whom they trusted, citizens in Ames accepted scientific interpretations that conveniently matched with their own belief and interests. We

suspect there to be some truth in this argument as well. But beliefs and interests are themselves embedded within social relations, including social relations of trust and distrust. You are, after all, in part, who and what you trust and distrust. By accepting scientific interpretations based upon personal beliefs and interests, these individuals would still be basing that acceptance, at least in part, upon social relations, and ultimately upon trust.

Thus, when released in October of 2000, the Commoner report challenged not only what was taken to be knowledge and truth, but also social networks of identity and trust, and the power relations embedded within these social networks. The Commoner report constituted a moment of phenomenological challenge, acting as a Garfinkel 'breaching experiment', removing the veil of individual ontology to expose the social character of our reality and the social relations of trust therein embedded.<sup>8</sup> And like a breaching experiment, a phenomenological challenge can yield two possible outcomes: the breach can be sealed and the original social relations retained, or the breach can result in new social relations – in a reorganisation of the social relations of trust and truth (and ultimately power/knowledge/identity), through discursive challenges to those relations.

Yet, as we have already stated, a shift in the social relations of knowledge is not merely a product of discourse, as Foucault may lead us to believe. Indeed, if it were, how would discourse itself change – through discourse? Such a tautology gets us nowhere, and certainly not to an understanding of the social relations of power/knowledge/identity. Thus, while Foucault was correct to proclaim that discourse produces speaking selves, he failed to recognise that *speaking* selves also produce discourse.

This dialogics of cause can be witnessed in our case study. Before the release of the Commoner report, existing social networks went largely uncontested. Yet, this is not to say that consensus reigned throughout the community regarding environmental issues surrounding the power plant. Many in Ames have long worried about such issues as dioxin generation, the plant's role in limiting the development of a significant local recycling effort, and the way the plant produces waste with concentrated toxicity rather than eliminating waste entirely. But sufficient discursive volume was not present before the Commoner report to create a significant phenomenological challenge to existing social relations. 'Whose' knowledge greatly influenced individuals' and groups' abilities to create an effective threat to the dominant social relations of power/knowledge/identity. Before the release of the report, the 'whose' in contention were Iowa State University scientists and the 'unsatisfiable' (read 'unscientific' and 'irrational') critics. In a community with a strong trust culture towards science and technology – especially when produced within the university – it is not too surprising 'whose' knowledge was most trusted, and thus perceived as being more valid, and why social relations of power/knowledge/identity went relatively unchallenged.

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But although the Commoner report was widely criticised by members of City government and individuals within the engineering department of the local university as being based on ‘flaky’ and ‘invalid’ science, it was based upon ‘science’ nonetheless. Thus, given the culture of trust present in the community toward science, the report was able to cross social networks and to challenge the phenomenological separation of their knowledges. By drawing on trust in the ‘scientific’ Commoner report, these groups were able to concomitantly attain a degree of ‘truth’, creating the aforementioned phenomenological challenge. The Commoner report provided sufficient leverage to lift networks of knowledge out of mere intersubjectivity and into a discursively constituted realm of superintersubjectivity, and brought to a discursive level who was where with regards to networks of knowledge – namely, did you place yourself within the social networks of the university and the city government, or did you identify with the Commoner study and its accompanying social relations? Thus, the dioxin controversy helped constitute the very networks of intersubjectivity that constituted it, at the same time as, perhaps paradoxically, challenging them.

The Ames Quality of Life Network was one such group that used the Commoner report to challenge the existing social relations of trust and truth. As a result, proponents of the power plant worked hard to discursively subjugate the knowledge networks of this local environmental group. This subjugation occurred through what we suggest calling *degradation discourse* – the discursive infliction of normative or affectual labels to weaken the communicative power of a group and/or individuals. Specifically, terms such as ‘radicals’, ‘crazy environmentalists’, and ‘tree-huggers’ were used to inflict discursive violence upon the group and its members, serving to narrow the group’s social networks of knowledge, and in so doing compromising their ability to engage in a deliberative exchange of validity claims within a public sphere.<sup>9</sup>

Nonetheless, the element of ‘science’ in the Commoner report – Commoner is himself an emeritus professor at the City College of New York, and the report itself is presented in scientific language and utilises a computer model – gave the opponents of the plant an entrée into other networks of trust and truth. The existence of this entrée is perhaps precisely what led to the degradation discourse. The Ames Quality of Life Network, which generally is given little credence in decision-making by the City, suddenly was in a position to redraw the lines of social relations. Reputations could be challenged, community pride undermined, identities shattered, and trust lost. However, the City Council’s current decision not to test the power plant for dioxin, whether based on ‘good science’ or ‘bad science’, has reaffirmed the social relations of ‘our science’, deeply constraining this opportunity for the emergence of new social relations and thus new identifications of ‘truth’.

## THE STATE, POWER, AND TRUTH

The dioxin controversy in Ames also provides a glimpse into the role of the state in issues of phenomenological challenge. Just as discourse creates speaking selves, it too creates speaking states, and just as *speaking* selves in turn create discourse, so too do *speaking* states. One must not lose sight of the fact that the state is an active participant in social relations of power/knowledge/identity. Yet to acknowledge the state as an active discursive participant is not to deny the fact that the state is also a product of discourse. Foucault (1979), for instance, saw the state as a discourse-producing mechanism that constrained individual action through the use of 'technologies of power' and through the production of normatively subjugated knowledge (i.e., using the veil of science and 'truth' to elicit and differentiate between 'right' and 'wrong' behaviour).

Yet we must not forget that the state is also people; people embedded in networks of social relations; people who are both produced by and who in turn produce discourse. Thus, while the state can indeed constrain and (re)construct individual action through the production of discourse – in this Foucault was correct – it is also constrained and (re)constructed through discourse, such as in the case of a successful phenomenological challenge. 'The state' is, therefore, a phenomenological event constituted through superintersubjectivity. Its actors – such as environmental advocacy groups, business leaders, religious leaders, and the politicians themselves – must be discursively constituted for intersubjectivity to occur.

As an actor involved in the maintenance of, and challenges to, social relations, the state also helps shape our identity. Not only does entry into the state influence who we think we are, and the social relations of knowledge we feel affiliation with, but the pretences on which that entry is based also determine the social networks we place ourselves in. There are numerous reasons for being granted discursive access into the state. For instance, whether we are brought into state-constituting discourse with the goal of consensus through an open argumentative debate, or merely as a means of pacification, will greatly influence how we trust, what we believe as the truth, and ultimately our identity.

In the case of Ames, the Ames Quality of Life Network felt embedded within a social network that was distinctly outside of the state. Thus, their identity, what and who they trusted, and what they believed to be the truth, were all embedded within social relations largely exogenous to the state. Members of the group expressed feelings of exclusion from local decision-making networks. And, in those few instances where they were given access to decision-making networks (and therefore tacitly given access to 'the state'), members felt more like tokens to give the illusion of open communicative deliberations than like communicative equals – which meant that even in those instances they were still not fully part of the state.



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This, of course, does not mean that the discursive relations in which the state is embedded – and thus the state itself as a discursive superintersubjective entity – cannot change. For an example, let us say that the City Council has a change of heart and new emissions tests for dioxin in the Ames power plant are ultimately conducted. The discourse of testing itself not only then becomes a text which we can examine, but it can also lead to a reconstituting of the state. Let us say hypothetically that the state decides to test *because* of the discursive challenges by ‘the environmentalists’ – chiefly, the Ames Quality of Life Network, but also student organisations such as the Iowa State University Student Environmental Council, and Barry Commoner himself. Such an action would then make ‘the environmentalists’ discursively part of the state. On the other hand, if the state conducts the tests for reasons *other than* ‘the environmentalists’ – for example, if the Iowa Department of Natural Resources requires it, or if the City Council finds it necessary simply to reassure ‘the community’ – the state would remain largely unchanged as a social phenomenon. Given that existing social relations of the state are at stake – and thus issues of power, knowledge, and identity – we must therefore begin to understand the state in terms of being in a perpetual discursive resistance movement.

As argued by Foucault, social relations are also relations of power. The creation of ‘in-groups’ and ‘out-groups’ with regard to the state, as has happened in Ames, presupposes power, and the language of ‘us’ versus ‘them’, or ‘our’ experts versus ‘their’ experts, highlights the power discrepancies between various actors across social relations. One’s embeddedness in social relations of power thus reflect, and are further enforced by, one’s access to the public sphere. In short, those with access to dominant social networks typically find it easier not only to express their voices within the public sphere, but also to have those voices heard, all of which has significant repercussions on whether you are perceived as being trusted in speaking the ‘truth’.

Yet Foucault was also quick to point out that power presupposes resistance. Social life could thus be likened to what we earlier referred to as *discursive volume*, where social relations of power/knowledge/identity contend with each other for discursive hearing. The state (and the discursive subjects embedded within it), therefore, to preserve current social relations, and thus its identity, must be on constant vigil to thwart the possibility of a phenomenological challenge. During periods of phenomenological challenge, to retain its current discursive configuration and ultimately its existence, the state must thus engage in discursive retaliation, through, for instance, what we earlier described as ‘degradation discourse’. Granted, in some instances the power discrepancies are so great that engaging in any form of discursive retaliation may actually benefit the group engaged in discursive contention with the state. Thus, in these cases the state might be better off ignoring the discursive challenge, hoping it might be short-lived.

In fact, shortly after the Commoner report was released, such a discursive tactic was employed by members of the state. As one City Council member stated to one of the authors, 'we just need to drag this out long enough that people forget about it'.<sup>10</sup> In this instance, the discursive retaliation employed was *not* to retaliate, in the hopes of it becoming a non-issue. However, the issue did not disappear and people did not 'forget about it', and it was not long until the state began to engage in other forms of discursive resistance.

One such tactic, as already mentioned, was the act of degradation discourse – to subjugate the knowledge, and therefore identity, of the discursive actors involved in contesting the existing social relations of knowledge. These discursive acts on the part of the state served to delegitimise the discursive claims brought into the public sphere by the actors engaged in challenging the existing social relations of knowledge. Being portrayed as 'radical', 'crazy', or 'unsatisfiable' served to weaken the contesting networks of knowledge by bringing into question their epistemological orientations as being somehow inadequate or beneath the required level of cognition or scientificity.

The state likewise engaged in degradation discourse against the findings of the Commoner report itself. Upon the release of the Commoner report, the state responded as though it was wronged and the findings of the report unjustified. One such headline read as follows, 'Ames officials demand apology for study's dioxin accusations' (Conover 2000: A1). A rather revealing example of the social relations of knowledge/power/ identity can be found in how the state discursively framed who exactly was wronged by the release of the Commoner study: '...we feel NACEC owes Ames citizens a huge apology for unfairness and destroying our reputation' (Conover 2000: A4). Here the state is largely arguing that if you consider yourself an Ames resident you must feel wronged by this report because it unjustifiably contradicts what *we* know to be true – it refutes our existing social relations of knowledge and identity. Subtly, however, the state is also implicitly stating that if you are not offended by this report, you are not one of us (the state), nor are you even a true citizen of Ames – you are a marginal 'other'.

The state further resisted discursive challenges to the existing social relations of knowledge by pitting 'our' experts against 'their' experts. In this rather risk-society-like manoeuvre the state (which, in this case, included the Iowa State University engineers) discursively challenged the Commoner report as being based on, for instance, faulty modelling and incomplete or inaccurate data. Thus, as in the case with the Ames environmental groups, the state engaged in degradation discourse to subjugate the knowledge associated with the Commoner Report by making such statements as 'our science is better than theirs', and by labelling the report as being 'flaky, discredited, and invalid'. Depicting its findings in this manner served to portray the knowledge as being beneath the required level of cognition or scientificity – thus providing justification for its inaccuracy and ultimately (the state hopes) its rejection.

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## CONCLUSION: THE CIRCLES OF TRUTH AND TRUST

'It takes two to speak the truth', wrote Thoreau after his *Week on the Concord and Merrimack Rivers*, 'one to speak, and another to hear'. Thoreau's lament was that truth is inextricable from social relations. He sought what he took to be a higher foundation for life and self, unpolluted by the social: nature.

We, however, do not intend to contribute to the history of lament over the social character of truth. Our purpose in this paper has not been to wallow in either the seductions of postmodern relativism or Thoreau's natural foundationalism. Yes, truth is social, and thus intimately bound up in the intimacies of trust. All truth is necessarily, in this sense, an intimate matter. Truth is a troth, and we are betrothed to it and by it. But we should not want it any other way, for to take the social out of truth is to ask us to ignore the phenomenologically unavoidable. Coping with *the beyond* that is the environment requires us as well to cope with *the beyond* that is the social.

Which brings us, necessarily, back to the political – and also to social change. We have in a number of places in our analysis tried to point out that while truth comes from trust, the converse is equally true. A change in the truth can lead to a change in trust and the social relations that it embodies. The relationship here is not merely circular, in part because the circles of social life are not wholly separate. Nor are they wholly worked out into functional unities. Social life is not complete, and in those messy bits there is hope for many surprises as social interconnections lead us to places of trust and truth that no one had, or could have, anticipated. Truth may not be either external or eternal to society, but it is often astonishing to society.

The relationship between trust and truth is also not merely circular because, just as the relations of trust are not seamless wholes that are already fully worked out, neither is our (necessarily social) understanding of the environmental beyond. If a test for dioxin is indeed eventually conducted, the findings will have significance for the dialogics of truth, and thus for the dialogics of trust as well. There will be unanticipated implications, likely for all sides in the debate. The circles may well change, however slightly, and perhaps become wider and more interconnecte and even perhaps more talkative.

Thus, rather than encouraging us to become postmodern cynics or Thoreavian recluses, we believe our paper points to a different solution to the problem of truth: to make it more social, not less. The problem has never been the social character of truth, but the limits of that sociality, resulting in exclusion and anomie. If we are to find wider truths, we must build wider trust. That will take more than two people: It will take us all.

Truth only has meaning within the networks of trust and distrust that pattern our lives and shape our understandings and motivations. To ask us to divorce truth from trust, to sever this betrothal, is to ask us not to be social. We can think of no less appealing, no less likely, no less necessary, ontological requirement.

## NOTES

<sup>1</sup> *Webster's Third New International Dictionary of the English Language* (G. & C. Merriam and Company, 1967). We also thank Dr. Greg Waite of the Department of English at the University of Otago for guiding us through the tangle of English etymological history.

<sup>2</sup> In making this statement, however, we are not taking a structuralist stance and reducing reality to language; we are only emphasising the discursive quality of social life. While Foucaultian discursive theory is correct to emphasise the discursive constitution of everyday life, it neglects the equally constituting effect everyday life has upon discourse.

<sup>3</sup> NACEC is a three-nation group, including Canada, the USA, and Mexico, which formed shortly after the signing of the North American Free Trade Agreement.

<sup>4</sup> 'Dioxin' is actually 210 compounds – 75 dioxins and 135 furans – with similar structures and properties, of which only 17 are toxic, with considerable deviation among these 17 in their toxicity (Brown 2001). Of these 210 compounds, one in particular – 2,3,7,8 tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) – has been reported as being the most toxic synthetic chemical ever tested in the laboratory (U.S. Environmental Protection Agency 1985). It is this compound, and a few other highly toxic relatives, that are generally referred to when scientists speak of 'dioxin'. One clearly demonstrated effect of exposure to dioxins is a disfiguring skin condition, chloracne, that can persist for years after exposure (U.S. Environmental Protection Agency 1985). Other reported symptoms associated with exposure to dioxin include nausea, headaches, depression, sexual dysfunction, and, most worrisome, a number of varieties of cancer.

<sup>5</sup> Personal email communication to Mike Bell on 6 October 2000.

<sup>6</sup> In fact, city officials venomously reject the label 'incinerator' in reference to the plant, preferring instead the designation of 'co-firing plant' or 'co-fired electric generating plant'.

<sup>7</sup> Lecture given by Barry Commoner at Iowa State University, 14 November 2000.

<sup>8</sup> In Garfinkel's 'breaching experiments', social reality was violated in order to understand how people construct their reality. The objective of the breaching experiments was to disrupt normal procedures so that the process by which the everyday world is constructed can be studied.

<sup>9</sup> These terms have been used in both public and private with regard to the group. (Interview with Joe Lynch, Executive Director, Ames Quality of Life Network).

<sup>10</sup> Personal communication with Mike Bell, October 2000.

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