Does radical innovation predispose a firm to a lack of social connectedness? Can improved governance practices compensate? A case study on Monsanto, genetically modified crops and stakeholder dialogue

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By Ariane König, April 2007

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Abstract: Most frameworks for ‘Corporate Social Responsibility’ posit stakeholder dialogue as essential tool for firms to be in touch with society’s needs and expectations. Successful and sustained dialogue requires integrity and some degree of mutual understanding and accountability. This case describes a situation in which achieving mutual understanding between a firm and environmental groups was not possible. Radical innovation led to re-organization, and this process undermined the firm’s integrity in that period. Moreover, not all environmental groups successful in influencing public opinion can claim the necessary integrity for such dialogue. Second, corporate and environmental groups used disparate modes of cognition, relying on different principles for establishing and verifying truth. In instances where a group’s identity and strategic objectives are deeply linked to just one mode of thought, self-reflection and understanding of the other may be too difficult. Dialogue with ‘translators’ may then be one option.

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The Challenge: Firms and environmental groups need improved governance practices to better understand diversity and discontinuities in world views to leverage technological change

Since traders tread on the silk route and shipping companies helped building empires spanning continents, the need to deal with values clashes across societies and rapid technological change is nothing new to business. However, since the 1990’s, in the words of Shell’s CEO Mark Moody-Stuart, multi-national corporations increasingly “[…] are coming up against problems that with the best will in the world we cannot seem to assess correctly.” For example, in the controversies on Brent Spar and genetically modified crops two old and established multinational corporations were overwhelmed by the public reaction and the use of these cases as a symbol by pressure groups. These types of modern socially intractable problems, for which in today’s pluralistic societies there is no objective definition of equity, and to which no response seems “correct” or “false”, have been termed ‘wicked problems’ (Rittel and Wolfson, 1968); more recently the term has been used to characterise certain types of environmental ills (Rayner, 2006).

In most Corporate Social Responsibility (CSR) frameworks, stakeholder engagement is seen as pivotal to developing corporate integrity and addressing conflicting interests in strategic decision-making. Claimed benefits from stakeholder engagement include reinforcement of a firm’s core values and vision; promotion of a firm’s organizational stability and resilience; and better understanding of how to manage reputation and trust. However, empirical proof of such benefits is impossible, as control experiments can not be set up. Such recommendations do much to raise expectations on corporate behaviour, but offer little, if any, deeper analysis of organizational circumstances that may affect success. Whilst most industrialists agree that stakeholder dialogue is needed to stay in touch with societal needs and preferences, there is disagreement about with whom stakeholder dialogue is possible, and what a good foundation for dialogue – a starting point from which mutual understanding and trust can be built, should look like. Platforms and processes that enable dialogue between groups with disparate values and worldviews may look and feel ‘clumsy’ if approached with today’s minimalist aesthetics. They can not rely on one in itself coherent framing of an issue (Verweij and Thompson, 2006). Moreover, as this paper adds, reasoning can not rely on one only coherent mode of thought for establishing and verifying truth.

Project Objective: To better understand barriers to dialogue between groups defending diverse values and world views and how they can be overcome

This project’s objective is to characterize barriers to dialogue between firms and their stakeholders, and proposing a way to overcome them by doing an in-depth case study. The case concerns Monsanto, a firm whose mission to meet future food and energy needs with scarce natural resources with biotechnology-based solutions, placed it centre-stage of a social controversy. In spite of warnings from leading environmental management consultants the firm focused on one main target market and left largely unaddressed concerns expressed in other world areas; leaders felt that they held the moral high ground. This behaviour offered fertile grounds for scaremongering reports on the technology and accusations of corporate imperialism. Proponents of the technology felt the firm’s behaviour damaged the reputation of the industry and antagonized large segments of society against a promising technology. The need to respond to the resulting global controversy led the firm to try out different approaches to defining and interacting with ‘stakeholders’. 
**Project Methodology**

This project engaged current and former employees of Monsanto and leading environmental consultants to analyze the interactions between them and difficulties in engaging with groups that defend different values and world views. The analysis is based on company reports and publications from Monsanto and the environmental consultants, the evolution of regulation in the US and the EU, press articles, fifteen interviews with employees of the firm, seven interviews with environmental consultants who had worked with the firm, and my own experience of working in the firm for 45 months. The project identified and studied critical elements affecting an organization’s chances of success of engaging with other interests.

This case study provides an in-depth analysis of interactions between the firm and leading environmental consultants. The comparison of the disparate stances on ‘sustainability and gm crops’ and ‘accountability’ was the basis for putting forward a hypothesis that one major barrier to dialogue is the prevalence of two distinct modes of thought in the corporate and environmental groups.

The final drafts on the case study served as a platform for the firm’s senior executives and environmental consultants to be informed of and respond to each other’s views. This report focuses on results from analysis of interactions between the environmental consultants and the firm in the period from 1996 to 2000. The process of writing the sequel paper analyzing the period from 2001 to 2006 will provide another platform for all parties to further refine together their current understanding about definitions of accountability and stakeholders. This paper will address in greater detail what approaches, foundations and processes may be needed for improving mutual understanding on intractable environmental policy problems between organizations holding diverse values and world views.

**Sustainability, integrity, dialogue and their linkage**

According to leading thinkers on global sustainable development, corporate sustainability requires firms to perform responsibly in the economic, environmental and social spheres to satisfy the ‘triple bottom line’. The board and upper management has to lead by example, and stakeholder dialogue is a ‘sine qua non’ for firms to achieve the necessary degree of connection to society.

The concept of corporate integrity provides measures for adequate performance on all three fronts (Kaptein and Wempe, 2002). It can be conceived as the striving for alignment in three areas: (1) between different values, norms and ideals that motivate action; (2) between messages and actions; and (3) with the environment, or the firm’s stakeholders. The social contract for a firm’s ‘license to operate’ rests on fulfillment of all individual contracts for these three types of relationships: Between diverse roles held by one individual or entity within the firm; between staff, internally; and between the firm and its stakeholders.

In this framework, the firm’s integrity and capacity for engaging in a mutual and sustainable contract with others rests on five behavioural principles. The first principle is ‘Openness’, which comprises disclosure and truthfulness and the ability to listen and acknowledge the other side. It also assumes a social framework that imposes sanctions on failure to fulfill mutual obligations. The second principle is
‘Empathy’, which is the ability to place itself in the position of others, see full mix of benefits and harm to others from action and inaction. Third is ‘Fairness’, which includes the ability to reverse expectations of others to one-self and the willingness to contribute to the realization of the contract in proportion to benefits reaped. Fourth is ‘Solidarity’, which requires that the respect of this contract is placed above self-interest. Fifth is ‘Reliability’, which requires alignment of words and action, and sufficient coherence and uniformity in behaviour across internal constituents. These principles were distilled form the comparison of the codes of conduct of one hundred firms and their corporate context. These five principles for conduct need to be structurally embedded in the firm, and leadership in their enactment comes from the top. Kaptein and Wempe portray company who fails to do this as morally inept.

Moreover, corporate integrity in this framework means “acting in accordance with *legitimate* expectations of those around us.” Stakeholder dialogue serves to make collective decisions on which groups’ interests and rights should be partially sacrificed to secure the rights of the collectivity of stakeholders. Critics of this framework lack a more detailed analysis of how firms can actually decide which expectations of others may be legitimate, and which not (see for example, De Bakker et al., 2007).

In the case of Monsanto, indeed, one main difficulty for the firm was defining whose expectations are ‘legitimate’. Little advice on this exists in the above-described or in other CSR frameworks, on how this can be achieved. What does it take to make ‘legitimate’ judgments on ‘whose expectations may be ‘legitimate’? Another difficult but rarely raised issue is that a dialogue takes at least two – most CSR frameworks focus on the firm, but do not consider demands of other organizations with whom the firm is expected to engage.

**What can we learn from a deeper look at ‘practice’ in one case?**

In 1901 Monsanto was founded as a chemicals company producing chemicals for food and industrial uses, including saccharin and fibres. In 1940 agricultural chemicals were added, and the acquisition of G.D. Searle in 1985 added pharmaceuticals and NutraSweet. In 1995, Robert Shapiro, a lawyer graduated from Harvard, who had been General Council of Searle and headed NutraSweet, became chief executive of Monsanto. He spun-off of the profitable chemicals and fibres business to finance an acquisition spree to re-position the firm in both the genomics and seed sectors. Robert Shapiro, CEO of Monsanto, was widely considered a visionary realizing path-breaking ideas in combining Life Sciences and sustainability as business concepts. Other companies, including Novartis, Zeneca, Unilever, AgreVo, and Rhone Poulenc also embraced the life science concept in the early 1990s, seeking synergy through investments in agricultural biotechnology and pharmaceuticals and/or nutrition science.

Monsanto’s plan for developing products from biotechnology was three tiered: first, agronomic traits ‘helping growers to do more with less’; second, ‘quality traits’ for producing better food and fibre from plants; and third, using plants as biofactories plants replacing factories for producing pharmaceuticals, polymers and other useful molecules. The *Societal value proposition* was “to help people around the world lead longer healthier lives, at costs that they can afford, and without continued environmental degradation”. The success in the US of the first products of
agricultural biotechnology was staggering: for example, from the first year of launch in 1996 herbicide-tolerant soybeans seeds penetrated the market at rates never seen before, reaching a market share of 52% of all soybeans planted in the US by 1999. Monsanto’s stock price soared between 1996 and 1998.

Across the Atlantic, Monsanto’s placing on the market of genetically modified commodity crops unleashed a social controversy. By 1999, the situation had grown very polarized, and leading activist groups at that time were very successful in influencing public opinion in Europe, making biotechnology one of their central campaigning issues. Over a period of four years, the sun never seemed to set on the issue in the European press. By 1999 Wall Street’s tides turned. Share prices that had skyrocketed suddenly plummeted (although sales of products from agricultural biotechnology remained strong in the US as farmers remained convinced of the benefits). Greenpeace claimed Monsanto was the first multinational company brought to heel by global civic society.

Looking back in 2000, Robert Shapiro claimed that “earlier and more thorough stakeholder involvement might have helped.” However, the word ‘dialogue’ implies engagement of two parties. Were both organizations prepared to and capable of engaging? Lord Peter Melchett, heading Greenpeace UK stated at a conference in October 1999, after Bob Shapiro had spoken to the congregation via a video link, that Greenpeace would not have been prepared to engage in dialogue, unless Monsanto agreed to stop all selling of genetically modified crops and herbicides, and patenting of life (Charles, 2001). Monsanto could not accept these terms. The organization was faced with what Kapten and Wempe (2002) termed a ‘dirty hands dilemma’. In this type of dilemma, diverse stakeholder groups of a firm hold contradicting interests and expectations of the firm. In this case the clash is between interests of the shareholders (stakeholders with whom the firm has a direct business relationship, often termed ‘transactional stakeholders’) and environmental activists with whom the firm had no formal contract (stakeholders with whom the firm does not have a contractual business relationship, but who nevertheless feel affected by the firm’s actions can be termed ‘contextual stakeholders’). ‘Cleaning up’, the authors suggest, requires corporate integrity and involves reflection on wider obligations towards stakeholders.

In the first years of change of the strategic direction the firm’s executives sought advice from leading environmental consultants, including John Elkington, Paul Hawken and Amory B Lovins. However, sustainable business consultants agreed that the organization was, in the words of one of them ‘constitutionally deaf’ (Elkington, 2001, p.110). Early efforts to present Monsanto with diverse view points of parties affected by its actions had zero impact on the corporation’s behaviour. John Elkington, one of the leading consultants advising Monsanto executives, published on the web that he resigned his contract “because [Monsanto] resisted his advice on societal tensions in Europe with regard to GM technology.” John Elkington was working at the same time with other leading multinational corporations and environmental groups on finding joint solutions to difficult environmental problems, it was the first time he resigned a contract.

This analysis concludes that under Robert Shapiro, there were two main factors reducing the firm’s listening skills, and preventing engagement. First, radical innovation required prolonged and fundamental organizational change which in that
period undermined corporate integrity. Second, leading environmental groups were not prepared to engage, and there was neither common ground, nor common cognitive processes allowing the two disparate groups to build the required mutual understanding and accountability.

First, the constant organizational change, the fact that Robert Shapiro favoured loose organizational structures, and the resulting loose connections of ‘External Affairs’ departments with ‘Operations’, all contributed to Monsanto’s difficulties in connecting a vision with organizational realities in diverse local settings. Moreover, the interactions with environmental consultants and their attempts to expose the firm to diverse viewpoints were left unstructured, and the organization lacked the capacity to absorb new information. This situation was exacerbated as the environment perceived by the leadership did not match the information coming back from workshops with international stakeholders (Food chain, NGOs, and Asian officials) in Europe. In sum, at that time, there were no systems or structures in place to ensure sufficient connection of products and policy, present and future, external advice and action. The above issues, as well as expectations on returns for decades of investments in research in agricultural biotechnology narrowed the firm’s field of perception and led to a strong focus on the main target market -- the US. By 1998, the failed merger, low investor confidence and stress of being an easy take-over target likely exacerbated this trend. The corporate leadership structure was at that time insufficient to connect a vision to operational realities. These disconnections were certainly a major factor for the growing tensions between the firm and its stakeholders; between different departments – or in other words - messages and actions; and between values, norms and motivations. These disconnections evidently contributed in some instances in increased tensions between distinct roles of an individual or a group within the firm and with stakeholders.

Structural and leadership attributes of a firm that contribute to increasing the degree of integrity are not all that’s required for successfully engaging with groups defending other values and interests. It takes two to engage, and there must be a suitable foundation for mutual understanding and trust required to enter a sustainable relationship. But even if that were a given on both sides, there remains the problem of how one organization, with one predominant framing of the situation, can judge the legitimacy of expectations of another organization with an entirely different framing of the situation?

**Considering diversity of thought**

The capacity for a basic mutual understanding, a prerequisite for dialogue, is that both parties, at least to some extent, can understand each other’s reasoning. However, the comparison of how Monsanto and leading environmental groups framed the issues of ‘agriculture and sustainability’; ‘genetically modified crops and risk assessment’; and ‘accountability’ revealed not only disparate sets of underlying values and world views that have been previously characterized in cultural theory. Institutional culture can be considered as normative systems of values and systems of classification of knowledge, both of which can affect an organization’s style of cognition (Douglas, 1986). These affect the attribution of meaning in organizations and their capacity to interact with others. These may result in diverse and incompatible meanings attributed to issues such that this is little or no foundation for mutual understanding. This holds true in particular on matters of risk (Douglas and Wildavsky, 1982).
One source of distinct interpretation of problems of environmental policy is different interpretations of ecosystem stability. Ecologists have characterised four different fundamental interpretations of eco system stability. Cultural theory has then mapped these four different interpretations of nature to four typologies of social relationships (see for example Schwarz and Thompson, 1990; and Rayner, 1999). According to this theory, (1) Individualists see nature as ‘Benign’ – tolerant to recover from exploitation. Man is fundamentally atomistic and self-seeking. The individualist’s world is one of equal opportunities with little or no accountability between individuals. (2) Egalitarians see nature as ephemeral, fragile and a web of intricately interconnected systems, equilibria between which are easily disturbed. Man is sharing unless corrupted and favours egalitarian groups - without social hierarchies, though with some forms of mutual accountability. (3) In hierarchies, nature is often seen as stable, but with predictable limits; it requires experts to determine these limits and regulation to ensure the limits are not transgressed. Social relationships are characterised by asymmetrical transactions and appropriate forms of behaviour differ according to rank (accountability). (4) Isolates tend to see nature as capricious. Conceptions of asymmetrical relationships without accountability undermine belief in management and inhibit learning.

In this case study, comparison suggests that these competing frames are derived from two opposite forms of thought that prevailed in a firm with a strong science base and in environmental groups. Jerome Bruner, a cognitive psychologist and scientific advisor to President John F. Kennedy, characterized two distinctive forms of thought: the paradigmatic and narrating modes of thought (Bruner, 2006). The two modes rely on different principles and criteria for establishing truth. The paradigmatic mode resorts to formal verification procedures and empirical proof. The narrative mode relies on plausible stories in localized contexts, and requires dialogue. These two forms are irreducible to each other. Moreover, there is no direct way in which a statement derived from one mode can contradict or corroborate a statement derived from the other.

Both, Monsanto and environmental groups claimed that their main driving motivations were ‘ecocentric’. However, this analysis suggests that Monsanto’s conception of sustainable agriculture and benefits of GM crops were at that time firmly embedded in paradigmatic thought, whereas narrative thought structured arguments of leading environmental groups. For example, Monsanto in arguing about benefits and safety of GMOs, invoked ‘universal laws of science’ – such as the molecular biologist’s paradigm of DNA makes RNA makes protein – and that all DNA and RNA are equal in terms of safety as they are mere carriers of information. More sustainability could be achieved by replacing chemical ‘stuff’ with DNA in crops.

A contrasting view on the technology is defended by Amory B Lovins, one of the consultants who had worked in that period with Monsanto. He held that “[Monsanto] in the Cartesian tradition of reducing complex wholes to simple parts strives to alter isolated genes while disregarding the interactive totality of ecosystems.” Lovins by contrast pictures ecosystems in agricultural land as a complex web of interacting organisms (Lovins, 1999). In his view, the respect of natural order mandates minimal interference with such webs. This view of nature is similar to cultural theory’s
‘Nature Ephemeral’ which is often defended by egalitarian groups (Schwarz and Thompson, 1990; Rayner, 1998; Thompson 2003).

In thinking about possible impacts of nature, this interpretation calls for the narrative mode in which all explications are context sensitive and particular. In this mode, believability and coherence are the basis for truth, rather than empirical verification and fit with universal laws. Stories are understood as meaningful reconstructions of the world.

Greenpeace and other environmental groups opposing biotechnology also rallied for support with other stories, well exemplified by the story that Monsanto’s insecticidal proteins endangered Monarch butterflies that thrived on corn pollen, which was published in the Journal *Nature* (Losey et al., 1999). In several cases, as in that of the Monarch butterfly, these stories - where some lab results were drawn out of the lab and just placed into a ‘real life story’ did not withstand the scrutiny of those with experience on the actual circumstances in which Monarchs lived and GM farm crops were grown. Several times controversies resulted in the scientific community on whether the data used then by Greenpeace as a basis for scaremongering stories should have been published in a peer reviewed Journal at all. In this case, the editor of *Nature* for example withdrew his support for the publication after further consideration of critique of the paper by leading European scientists some of whom were involved the risk assessment of GM crops for governments.

The two groups (corporate and environmental) also defended two different conceptions of accountability. These disparate conceptions, too, can be attributed to the two opposite modes of thought. In the mid-1990’s Monsanto conceived of its accountability largely as adherence to formal general rules on product claims, disclosure, and legal compliance. A broader understanding of the impact of the firm’s actions on others – be it other players in the agro-food chain, or consumers in other markets than the US, was largely neglected. Environmental activists on the other hand tended to informal conceptions of accountability. Greenpeace UK carefully crafted their messages and actions based on surveys of consumer concerns. Some groups, such as Greenpeace UK, however, even had a tendency in that period to neglect formal rules. They apparently wilfully leaked to the media distorted information on science, and damaged fields with GM crops – including government – coordinated trials.

In sum, the dominance of the paradigmatic thought style in the firm and the narrative mode in environmental groups exasperated the problems of connecting in a meaningful way with each other. It seems that in this case the flip side of a visionary’s focus on a paradigm shift (in this case, ironically, turning sustainability into a business concept) was a certain blindness to social norms and values, and impacts of own actions on others. On the other hand, in particular environmental groups including Amory B Lovins, and Greenpeace appear to have operated more in the narrative mode -- further reinforcing the polarization and lack of a common basis and processes for reasoning. This analysis supports and builds on prior analyses that have characterized the scientific c community as a ‘thought collective’ and mapped thought styles as vehicles for communication of different social groups.
The main insight from this case study is that in trying to establish the required mutual understanding and trust for dialogue, and ultimately joint action for environmental protection, understanding each other’s reasoning may prove essential. This would involve the awareness of prevailing disparate processes for establishing truth, the capacity to switch between them, and the preparedness to use both modes to construct a more ‘robust truth’ that will be more acceptable to the other party. However, not all groups may be capable of this. In some cases part of the group’s identity and strategic objectives may be intricately linked to the prevailing form of reasoning. Examples for this may be the tendency for paradigmatic reasoning in groups with a strong science base, and adherence to informality in groups whose identity relies on ‘fighting for the environmental cause by critiquing the system’. In such cases seeking dialogue with groups who can act as ‘translators’ may be more fruitful than trying to engage with groups that just appear to be outright ‘unreasonable’.

**Synthesis and Outlook**

Appreciation of different worldviews on environmental problems requires the ability of collaboration within and between organizations, and across groups with different values and worldviews. A shared understanding on the challenges world civilization will face in future in the area of use of natural resources and agriculture has not as yet been reached. And even such a shared understanding may not suffice for current opponents who share the goal of making agriculture more ‘sustainable’ to join forces for collective action. In order to enter such a dialogue some degree of mutual understanding and accountability is required.

This case study highlights that the necessary degree of mutual understanding between two diverse groups may not only require a certain level of integrity in both. Mutual understanding may also require the capacity of following the other party’s reasoning – at least to some degree. This may be facilitated if the organizations have the capacity for being reflexive about their own prevailing processes for reasoning, and can reconstruct the other party’s. This analysis of one case study is the basis for the hypothesis this capacity may require switching between the paradigmatic and narrative modes of thought. All organizations have the capacity to use both the paradigmatic mode and the narrative mode. For example, Monsanto tells many stories illustrating benefits individuals farmers have derived from the technology, as well as referring to abstract concepts such as ‘Moore’s law’. In risk assessment, however, ‘principles of science’ prevail, which seek to make claims universally valid. If in this realm confronted with a group such as Greenpeace, the two organization’s mission, identity and strategic objectives are so opposed and these are linked to their modes of cognition, such that both organizations in such instances can be trapped in the opposite modes.

These hypotheses are further developed in a second paper that compares how Monsanto conceived the concepts of ‘agriculture and gm crops’, ‘stakeholders’ and ‘accountability’ in three time periods with distinct Chief Executive Officers (CEOs) between 1996 and 2006 (König, manuscript in preparation). There is preliminary evidence that in the period from 2001-2003, during major efforts to understand alternative framings of issues through engaging in a broad, structured and mediated stakeholder dialogue process in Europe, the firm did rely on both paradigmatic and narrative modes of thought to make decisions impacting the business. Analysis of Monsanto in the period from 2003-2006 under Hugh Grant raises questions on how
broad definitions of ‘stakeholders’ need to be to ensure business success. Might translation of concerns from groups defending disparate sets of values obtained from more like minded organizations suffice for success? For example, a firm like Unilever that markets consumer products is close to consumers and invests a lot of resources to understand concerns across groups and markets in which disparate sets of values prevail; moreover, this corporation is not as dominated by their technology departments as might be the case in a high technology provider. Some corporate groups, by the nature of their business may have more capacity for operating in both modes of thought, than others (contrasting firms upstream the value chain who are technology providers for natural resource extraction with firms downstream the value chain developing consumer products). Is a focus on dialogue with and translations of diverse views provided by other players in the value chain sufficient for upstream technology providers to better understand those at the other end of the chain - consumers views - across disparate markets? Further insights from this case are intended to contribute to developing more general guidance for organizations who would like to engage with groups defending distinct sets of values.

Key references/Further reading


