

Dilemmas of Self: Image and Identity in Monsanto's Struggle with Genetically Modified Organisms for Agriculture

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Organisational image and identity are the focus of considerable managerial and academic attention. Perusing the range of literature on these subjects it quickly becomes clear that this interest stretches across previously clear defined academic (and also managerial) boundaries. Traditionally organisational identity has been the concern of the organisation and economic literature as a way of organising. Organisational studies literature has focused on internal aspects of both organisational identity and image (Albert & Whetten, 1985). Weber argued that bureaucracies [something about the control of bureaucracies]. More recently attention has turned towards organisational identity and image as a way of organising external stakeholders. A burgeoning literature on corporate branding (Balmer, 1995) and reputation management (Dowling, 1993) are witness to the role of image and identity in developing relations with the organisation's external publics. Building from product branding principles where products are imbued with a brand identity (Aaker, 1996), focus has shifted towards to possibilities to develop corporate brands. In this way corporate image and identity are seen as both ways of organising and of ways of marketing; corporate branding in other words crosses the boundary between the internal and the external.

The need to integrate communication to internal and external stakeholders is increasingly seen as a strategic necessity. Strategic in terms of differentiating the firm from its competitors, but also in terms of defining who the firm is in relation to investors, employees, politicians, NGO's and the general public. Using organisational identity strategically requires that the organisation aligns its

communication both internally and externally. Hatch & Schultz (2001) argue that this is only effective through the alignment of 3 factors: vision, image and culture.

In this paper we concentrate on the efforts of Monsanto to align these factors in an attempt to redefine itself as a life sciences company. Under the leadership (and vision) of its then CEO, Robert Shapiro, Monsanto attempted significantly to also build up an identity as a sustainability organisation: "... we got a group of our people together and asked them to think about what was happening in the world and the implications for Monsanto. Out of that emerged an awareness of human impact on the environment, and the prospect of human and ecological disaster. And around that coalesced a commitment to sustainable development..." (Lewin & Regine, 2000: p.223).

Whilst under Shapiro's leadership Monsanto did indeed seek to align its culture, image and vision its attempt to define itself as a sustainability company was no great success. Neither in the public eye nor through measures of sustainability, such as the Dow Jones Sustainability Index has Monsanto succeeded in convincing its various publics of its identity as a sustainability company. Following Monsanto's failed attempt to launch Roundup Ready Soya on the European market, the backlash from European consumer, politicians and supermarket chains, and also from US farmers following the devastation of their export potential, and the subsequent drastic decline in their share value.

This paper looks at Monsanto's attempt to redefine its identity as a form of communication which is bound in established discourses and discourse practices. Its attempt to redefine its identity is seen as an attempt to redefine both the signification schemes and norms of the company, but more significantly the discourse of business. Monsanto attempted no less than to redefine the discourse

of business through the cooption of the term life science company. Using this approach allows for an understanding of the opportunities and barriers to changing the rhetoric of business. This paper therefore directs its attention to the following questions:

- Why did Monsanto's attempt to define itself as a sustainability company fail to succeed?
- What signification schemes and norms are reflected in Monsanto's attempt to define itself as a sustainability company?
- What barriers did Monsanto meet in using the sustainability metaphor?
- Were there variations in Monsanto's discourse across genres? (Letters to shareholders, media releases, newsletter to farmers) If so what is there significance? Did they change over time?

Monsanto

Monsanto was founded in 1901 and became one of the world's leading chemical companies of the 20th Century. By 1997 it had a workforce of 22 000 and sales of \$7.5 billion. 1997 was a watershed for Monsanto. Under the leadership of CEO Robert Shapiro Monsanto began the change from a chemical company to a life sciences company. In Shapiro's own words, "Monsanto's existence as a chemical company... began with the founding of the company in 1901 and ended on 1st September 1997, with the spinoff ... of our chemical businesses as a new, independent company called Solutia Inc." (Monsanto, 1997). Life sciences is being promoted as a revolution as great as that witnessed in the computer industry in the late 1960's. It brings together agribusiness, chemicals, health care and pharmaceuticals as well as IT and potentially energy into a new synergistic industry that challenges our traditional conceptualisation of each of these industries

(Enriquez & Goldberg, 2000). Monsanto is generally considered to be a front-runner in this process. As part of its restructuring Monsanto invested \$8 billion in a range of seed and biotechnology companies. Their aim was to create a web of organisations involved in the research, development, production and distribution of the new technology. This high investment policy is typical of emerging life science companies and has been identified as their Achilles heel since pay back for such large scale investment is very much long term. Whilst a general decline in the agribusiness affected the whole industry at the end of the 1990's Monsanto additionally faced a major crisis following the popular rejection of its technologies by consumers and consumer distribution channels in Europe. Such was the extent of the backlash that the European market for US soyabeans collapsed as the European Union introduced a moratorium on the planting of genetically modified organisms (GMO).

Identity and Image

The relationship between corporate image and identity is one that has received increasing focus in both the marketing and organisational literature in recent years (Smircich & Morgan, 1982; Bernstein, 1984; Dowling, 1993; Hatch & Schultz, 1997; Bolino, 1999; van Riel, 2000). There is a clear tendency to begin investigating the middle-ground between these two distinct fields of study, particularly within the areas of organisational story-telling (van Riel, 2000), issue management (Cheney & Christensen, 2000), reputation management (Bolino, 1999), marketing (Christensen, 1995) and most recently with corporate branding (Hatch, Schultz, et al. 2000).

Corporate branding transposes the well-known concept of branding to the organisation by looking at the ways in which the firm is involved in an interplay of identities; with the consumer (Sternberg,

1999)), with other organisations, including competitors, suppliers and customers (Kaptein, 1999), and NGO's (Edelman, 2001), and with itself (Christensen, 1997). This interplay goes beyond traditional conceptualisations of organisational identity since it involves external audiences. Likewise it goes beyond the traditional control orientated conceptualisations of image management as espoused in the marketing literature.

Hatch & Schultz (1997) emphasise the central role of organisation culture in bring together the concepts of organisational identity and organisational image. For them organisational identity is "grounded in local meanings and organisational symbols" where organisational culture is the "internal symbolic context for the development and maintenance of organisational identity" (p.358). Linking identity and image is the organisation's ability to create leadership and vision to an extent that links internal and external publics.

Leadership and vision are both characteristics of Monsanto's former CEO. Since his ascendance to the position of CEO in 1985, Shapiro envisaged both a new focus for the firm in the life sciences and a radically new organisational form. Shapiro identified two reasons for transforming the company (Lewin & Regine, 2000). Firstly, was his desire to change the culture of the company; from a traditional hierarchical chemical company to a decentralised, flexible and creative workplace. Secondly, were the external demands being placed on the industry; in terms of technological development, competition and environmental responsibility. Essentially what Shapiro envisaged was changing the organisation's culture. "I wanted to break the organisation down internally, break old habits and old ways of doing things, by giving people challenges that they couldn't handle by doing things the way they always had" (Lewin & Regine, 2000: p.214). Similarly, he began defining the "new" Monsanto in terms of a life sciences company driven by a

motivation to solve some of society's most intractable problems and help people "to lead longer, healthier lives, at costs that they and their nations can afford, and without continued environmental degradation" (Monsanto, 2000). It stands as a powerful attempt to redefine the identity and culture of the company. Combined with the selling off the chemical side of the company and the structural changes in the company Shapiro's vision was to be the enabling element which allowed the new culture and identity to emerge. The confluence of these two motivations is not coincidental, but symptomatic for changes in late capitalist society. They set the scene for Monsanto's attempts to define itself as a sustainability company.

Risk Society

A number of theories of society raise the issue of identity and social relations in late capitalist society. These come under the various themes of late-modernism (Jencks, 1992), detraditional society (Heelas, Lash & Morris, 1996), postmodernism (Jameson, 1991) and reflexive modernization (Beck, Giddens & Lash, 1994). Beck (1992) presents a society that is increasingly turning in on itself - not in a self-reflective, introvert way, but critically, questioning the very principles upon which society is founded. Modern society's fundamental belief in technological progress and the benefits that it can give to mankind are now being overshadowed by the negative effects of that technology. Threats, or risks, to society are coming from the source of society's wealth. Scientific and technological progress has produced the very industries that are now threatening our environment and our future survival argues Beck. Unparalleled growth has produced a society that is reliant on the products of its own destruction. Not only that, but science is not producing any answers to many of our environmental problems. Indeed, Beck argues, there is an increasing perception that "science has become a protector of a global contamination of people

and nature." (Beck, 1992: p.70)(Mulgan, 1994; Habermas, 1975) Traditional institutions: government, business, science, etc., face a crisis in their legitimacy (Laufer & Paradeise, 1990: Mulgan, 1994; Habermas, 1975).(Habermas, 1975) The individual reassesses, and questions critically these institutions of society. In questioning these institutions the individual accepts a greater personal responsibility for their life. Thus, whilst it was once the case that the individual would allow responsibility to lay externally, believing that elected bodies and formal organizations were both capable and legitimate carriers of authority, it is now the case that the individual feels impelled to take on the responsibility themselves. As Thompson (1996: p.90) writes, "As traditions lose their hold in many spheres of social life, individuals are obliged to increasingly fall back on their own resources to construct a coherent identity for themselves. Whereas traditions once provided - or so the argument goes - a relatively stable framework for the self and for the process of self formation, today individuals must chart their own course through a world of bewildering complexity, a world in which our capacity to understand is constantly outstripped by the unintended and far-reaching consequences of our actions." Increasingly legitimacy becomes centred around the individual, or around the collectivity of individuals, public opinion.

There are two main consequences in terms of this case: a need to search for identity – individual identity and corporate identity – and a growing scepticism against science and technology.

Identity

Reflexivity in society results not only in a questioning of traditional institutions but also a need to activity build up personal identities (Giddens, 1994). The individual is put in the position that he / she must negotiate their identity (Featherstone, 1995a). In this system work takes on a new

meaning. Whilst the traditional conceptualisation of professions and family business or even family traditions within particular trades are quickly disappearing (witness the difficulties in family businesses to persuade the new generation to take over the business, the career choices of individuals after they leave school and the "marketisation" of traditionally strong professional firms) work becomes a major source of personal identity. For many work gives the individual meaning (du Gay, 1996). Through challenges in their work or simply social interaction; work provides many with a stabilising factor in an otherwise chaotic everyday. Additionally, as individuals are increasingly "in the market" for meaning: activities, relationships or products that give meaning to the individual, so the market responds. Branding and lifestyle marketing and promotion are here to fulfil our needs to tell ourselves and other who we are. Corporate branding in this perspective can thus be seen as a natural result of these tendencies.

Risk

The risks and contradictions of society become internalised in the individual as traditional institutions lose their credibility. In the absence of clear guidelines from government and science about risk in society today, it is left to the individual to change his or her lifestyle to match their *perception* of the risks involved. Individuals must draw from their own experiences and the complex assemblage of role models, the media and friends that form the discourse communities to which they belong, to make decisions about their stand the issues that they face. It is through the position we take on these issues (including abstention) that we add to our personal identity. With the loss of traditional sources of collective and shared meaning, we seek to create our own personal identities: through our lifestyle choices, the things we buy, the groups to which we belong, the causes we support and the opinions that we have. Thus, we create our own biographies in the

absence of the old traditional lifeways provided by apprenticeships, family businesses and traditional career choices (Beck & Beck-Gernsheim, 1996). The individual is no longer the role player of the industrial society, but is active in making decisions about his or her future.

"Individualization means the disintegration of the certainties of industrial society as well as the compulsion to find and invent new certainties for oneself and others without them." (Beck, 1994: p.14) Individuals feel both a new responsibility for and an accompanying uncertainty about their lives. This responsibility (whether real or perceived) results in the individual taking a more critical stance towards many of the traditions of society that were once taken for granted. One of the more visible results of this trend has been the emergence of consumer activism (Coombs, 1998) and of the so-called sovereign consumer (Smith, 1990).

Having outlined the context for this study the next section looks at how Monsanto's attempts to redefine itself are reflected in the signification schemes and norms embedded within the discourse of public documents of the organisation in this period. For the purposes of this analysis we have chosen to use a variety of sources which reflect Monsanto's CEO's visions and analysis of Monsanto's strategy. We have chosen the annual Letter to Shareholders in the Annual Report supplemented by public statements by Robert Shapiro on his vision for Monsanto. Additionally we chose a benchmark organisation with which to compare Monsanto's discourse.

The choice of benchmark organisation is based on seeking to find a similar firm that also defines itself as dealing with sustainability issues. The purpose of benchmarking is to provide a comparison for Monsanto's actions against another similar organisation that exists in a similar institutional context, i.e. a for-profit organisation in the same industry. The comparison looks particularly at the reasons for the apparent accept of the benchmark firm compared with Monsanto.

In this case we have chosen Novozymes, a recently formed offshoot of the pharmaceutical company Novo Nordisk. Novozymes defines itself as a life sciences company built upon gene technology and leads in Dow Jones Sustainability Index for this industry group. Given the timescale of the following case, we have chosen to use Novo Nordisk's Annual Reports since Novozymes was formed in 2000.

Case: Monsanto

The following material has analysed the text of the letters to shareowners for the annual reports of Monsanto and Novo Nordisk. One article published by the Harvard Business Review has also been included. The particular theme of that article was on the relationship between Monsanto and issues of environmental sustainability. Shapiro was speaking on his own behalf for that article.

There are two main aspects to the discussion of the language used in the documents chosen for this study. First, the text of the documents was coded such that words in the text were tagged with a limited set of concepts. Words such as value, belief, believe were tagged as the concept 'value'. A set of 105 concepts were included in the coding software, although not all concepts were discussed in the analysis. There are two key quantitative measures produced by this analysis. First is the frequency of occurrence of the concept in the text, this is a rough measure of the prominence of that concept in the discourse. This value can be directly compared from document to documents as it is independent of the length of the document. The frequency of use of a concept is however rarely enough to provide reliable indication of the sense of use of a concept. The second measure then reports the number of times the concept is collocated, occurs nearby in the text, with other concepts

in the text. This measure provides an indication of the sense in which the concepts are used. This measure has been used to provide quantitative measures of aspects of political language (Fairclough 2000) forensic language in a disaster enquiry (Gephart 1997) and maps of team mental models (Carley 1997). The statistic used in this paper is the raw count of collocates found in the text. It is possible to produce other statistics, for example the frequency of occurrence per million words of text, and in this form it is plausible to argue that the collocates from texts of different length could be directly compared. It may also be argued that it is the raw count of collocates that is important rather than the frequency, as it is really how many times in total that the collocate occurs that represents the intent of the text producer to create an impact through that text. In this paper we have chosen to adopt the simpler statistic, the raw count. Thus when inspecting the tables of collocates in the following section this should be kept in mind. The length of the documents is very variable, and so the significance of the counts should be modulated to some extent by the length of the text.

Values and beliefs

Monsanto were unwilling to include material related explicitly to the term values or beliefs in their letters to shareholders. The frequency of use had risen during Shapiro's time as CEO, but it was not present in the first of the reports from the new CEO in 2000. The collocates indicate a financial context for values, and limited association with the business, and the terms relating to 'our' or 'we'. The annual reports of 1998 and 1999 for Novo Nordisk were characterized by much higher frequencies of occurrence of the terms related to values, and these were associated with the business and highly collocated with 'our' and 'we'. The size of the text for 2000 for Novo Nordisk is quite small, and while the frequency of occurrence of the values concept is still high the number of collocates has become very small.

The context in which the term values occurs suggests that this is a term that was not part of the vocabulary of the Shapiro, and certainly not of the current CEO.

to solutions for many large intractable human		that Monsanto's Law will produce	
problems . We	believe	economic effects on a scale	[MonLTS97]
nutrition and human health . We've been		that these technologies driven by	
unwavering in our	belief	"Monsanto's Law" see page 18	[MonLTS98]
that their worth was more closely related to the		of new biotech traits than to the historic	
future	values	value of	[MonLTS98]
		. These values reflect the belief and	
special kind of company driven by a strong set of	values	confidence we have	[Ndisk98]
Although we consider performance against hard		as equally important elements the big	
business objectives and soft	values	challenge for management these	[Ndisk98]
a fleet of ships each captained independently but		of what Novo Nordisk is all about . We	
sharing common	values	are	[Ndisk99]
		they want to be part of a company that	
. So why do people come and work here? I	believe	has	[Ndisk00]

Open discussion of values in organisations is now commonplace. As academics and managers become more focused on marketing and management techniques such as value-based leadership and corporate branding, the resultant vocabulary becomes subsumed into the everyday discourse of business. For Monsanto, and for Shapiro in particular, values are seen as instrumental in achieving a new organisation form. Values are thus linked to questions of internal motivation and organising rather than to wider social concerns about the legitimacy of business or of business discourse.

Science and Technology

Technology is prominent, and rising over time, in each of the four Monsanto LTS. The technology related terms in the final two letters from Monsanto is over five times as frequency of use by Novo Nordisk.

Technology related terms are used at more than five times the frequency in the Monsanto text compared to the Novo Nordisk text. The frequency of use by Shapiro in the HBR article is half that used in the annual report.

Name	[MonLTS96]	[MonLTS97]	[MonLTS98]	[MonLTS00]	[hbr-rs97]	[Ndisk98]	[Ndisk99]	[Ndisk00]
RawText	2111	2799	1658	1222	4610	714	779	275
Coded Text	802	1138	704	509	1898	305	331	122
tech (ppm)	10436	12916	19031	19531	8417	2692	2466	3460
finance	12	13	17	11	7			
compete	2	3	7	1	1			
market	11	5	21	5	4			
strategy	2	1	6	3	2			
business	12	19	19	14	7		2	1
focus	6	5	6	12	12			3
change	21	21	13	13	13	5	2	

The text associated with technological concepts covers the whole range of Monsanto's discourse. A sample of four consecutive occurrences exemplifies the full range

industries agriculture nutrition and human health .
Weve been unwavering in our belief that these
relevant to that purpose . Everything weve seen in
the last several years in the
to bear all the required capabilities . On the other
hand the extent of the

laboratory
technological

driven by "Monsantos Law" (see page 18) will
fundamentally transform those industries causing
radical changes
and in the marketplace strengthens our
commitment to this strategy . One of the obvious
and economic interconnections is likely to make a
niche strategy harder to defend . Genomics

It becomes clear that Monsanto builds its understanding of sustainability from a technological perspective. Technology, particularly gene technology is promoted as the solution to the world's

food problem and more generally to giving people "happier and healthier lives." Technology becomes the driving force of Monsanto's discourse.

This creates a fundamental problem for Monsanto when it attempts to direct its message to a wider audience than that in the business arena. As outlined above, one of the main characteristics of late capitalist society is a mistrust of science and technology. As Beck (1992) and Giddens (1991) argue, for many science and technology are the sources of the very risks that characterise society today. Combined with the growing movement of so-called sovereign consumers and the political reactions that follow, Monsanto's belief in technology must be seen as problematic from a communicative perspective.

Competitive environment of business

Under Shapiro the prominence of the *compete* concept was similar in the reports of Shapiro and Novo Nordisk. The prominences of *compete* in the Monsanto 2000 annual report was substantially lower than in all of the other annual reports. The most notable difference in the pattern of collocates between Monsanto and Novo Nordisk was in the prominent associations with technology observed for Monsanto under Shapiro. Collocates with *market* were important for Monsanto and to some extent for Novo Nordisk. Collocates with *business* were consistently important for both companies, excluding Monsanto 2000.

Name	[MonLTS96]	[MonLTS97]	[MonLTS98]	[MonLTS00]	[hbr-rs97]	[Ndisk98]	[Ndisk99]	[Ndisk00]
RawText	2111	2799	1658	1222	4610	714	779	275
Coded Text	802	1138	704	509	1898	305	331	122
compete (ppm)	3176	3399	3460	781	205	4038	3699	3460
finance	5	6	3		1	1		

market	6	4	6		2
strategy		1	1	1	2
business	8	4	6	1	4 3
focus	3	3	1		
tech	2	3	7	1 1	
change	6	3	2	1	4

Compete occurred in text where Shapiro is using the presence of a strong competitor to validate the performance of Monsanto. He explains declining sales through aggressive price competition, performance is good in highly competitive markets, we need to move quickly because we have competitors who are among the worlds greatest companies, and we need to invest in technology to keep ahead of competitors.

products sector were down 3 percent and
 operating contribution declined 10 percent . in tabletop sweeteners was the major cause . In
 Aggressive price competition addition to strong operating performance the [MonLTS97]
 been successful in other markets and is off to a U .S . nonsteroidal anti inflammatory market . We
 good start in the highly competitive entered into two major collaborations to [MonLTS97]
 biotech that we had a somewhat deeper
 understanding of its implications than many of . A year or two ago we were probably ahead of
 our competitors the pack in seeing [MonLTS97]
 discovery accelerates our success will in picking the right targets and assembling the
 increasingly depend on our ability to move faster necessary capabilities . The ag biotech
 than our competition investments [MonLTS97]
 means of addressing issues of mass . Industry . We want to participate in that process at
 consolidation will in the end affect all competitors appropriate times and from a position [MonLTS97]
 lead the evolution of the life sciences industry . are among the world's greatest companies with
 We recognize that many of our competitors fine people and abundant resources . We know [MonLTS97]
 We know that over time the only sustainable advantage is a working environment that enables
 source of competitive our people together to outperform their people . [MonLTS97]
 can capture and second the need to move . As you know our strategy is to apply the
 quickly to maintain our lead over increasingly competitors dramatic breakthroughs of gene based [MonLTS98]

aggressive technologies
believed that in this business speed would be with the right traits in the right germplasm in each
critical getting to market ahead of our competitors key crop and market . [MonLTS98]
to market . We explored a number of possible
of seed companies to get the crop and market approaches through contractual relationships
coverage we needed to beat the competition alliances or [MonLTS98]
These companies didnt come cheap . Their understood that their worth was more closely
owners and our competitors related to the future values of new biotech [MonLTS98]
U .S . provider of prescription arthritis treatments marketplace . Now we and our marketing partner
demonstrated our marketing ability in a highly competitive Pfizer Inc . are in the process [MonLTS98]
the inclusion of two or more beneficial traits in advantage and leadership . In the long term we
one plant will further strengthen our competitive must keep doing what we did [MonLTS00]

Change

Both organizations and the HBR paper had high levels of prominence for the change concept, with the 2000 Novo Nordisk annual report showing some decline, but as always the sample is small for that year. Change occurred through the agency of new products,

It's already pretty clear that explosive new fields such as genomics, bioinformatics and powerful screening methods will apply broadly to agriculture nutrition and health . They'll help us identify new targets for products and create new ways to discover and develop those products .

And new ventures

Our position in food and consumer markets is allowing us to develop an entirely new strategy for food and nutrition based on closer integration with our ag biotech and human

And, as always with Monsanto and new technologies, change is presented as unproblematic and as an improvement or an opportunity for some action by the organization.

Name	[MonLTS96]	[MonLTS97]	[MonLTS98]	[MonLTS00]	[hbr-rs97]	[Ndisk98]	[Ndisk99]	[Ndisk00]
RawText	2111	2799	1658	1222	4610	714	779	275
Coded Text	802	1138	704	509	1898	305	331	122
change (ppm)	13158	10197	8651	8594	8622	12113	16030	3460
Finance	14	9	7	6	15	2	4	
Compete	6	3	2		1		4	
Market	14	12	9	1	4	3	3	1
Strategy	4		2			2	1	
Business	17	17	7	8	21	1	12	
Focus	7	5	2	6	11	2	2	
Tech	21	21	13	13	13	5	2	

Finance

A number of terms are collected into the *finance* concept. The distribution of terms has changed as the CEO changed at Monsanto. The count of the terms has fallen, but the frequency has increased. Terms associated with expenditure appear to have been excoriated from the vocabulary. Shapiro appeared to be fond of *spend* and *invest*, whereas his successor appears to be more willing to talk about *cash*, *cost* and *income*.

Concept	[MonLTS96]	[MonLTS97]	[MonLTS98]	[MonLTS00]	[hbr-rs97]
afford		1			1
capital				1	1
cash	4	1		6	3
cheap		1	1		1

cost	6	3	4	4	7
dividends	1	1			
earnings	2	4	3	1	
economic		2	4	1	11
economical		1			
economics					3
economies					3
economy					3
expenses			1	1	
finance	3	2	3	2	
fund		1	1	1	
income	2	10	2	3	
invest	5	9	5	1	1
Pay	1		1	1	
price		4		1	1
profit	4	1	5	1	1
prosperity				1	1
rates					
revenue	1	3	3	1	
shares	1	3			
spend		10	8	1	1
taxes				1	
Grand Total	30	57	41	28	38

Monsanto has *finance* more prominently in its discourse, and this has increased in the latest annual report. The prominence of the *finance* concept for Novo Nordisk is significantly lower than that of Monsanto, and it has fallen in the annual report for 2000. *Finance* is collocated with the market for

both companies, but the most significant change is in the emergence of the *focus* concept in the 2000 annual report for Monsanto, and to a limited extent for Novo Nordisk.

Name	[MonLTS96]	[MonLTS97]	[MonLTS98]	[MonLTS00]	[hbr-rs97]	[Ndisk98]	[Ndisk99]	[Ndisk00]
RawText	2111	2799	1658	1222	4610	714	779	275
Coded Text	802	1138	704	509	1898	305	331	122
finance (ppm)	13612	19375	14418	21875	7801	8075	6165	3460
compete	5	6	3		1	1		
market	7	21	10	2	5	4	3	1
strategy	2		1	5	2	1	1	
business	19	19	16	17	13	2	6	
focus	10	7	6	32	13			1
tech	12	13	17	11	7			
change	14	9	7	6	15	2	4	

Market

The concept of the *market* occurred with a variable frequency in the text of both companies, and given the variation from year to year, the differences between the companies does not appear significant. *Technology* was a significant collocate for Monsanto, and does not appear as a collocate for Novo Nordisk at all. *Finance* is significant for both companies, and *strategy* also has a strong collocate in Monsanto and a limited level of collocate for Novo Nordisk. The principle differences appear to be related to a high level of association with *technology* for Monsanto and with a higher level of association with the *compete* concept for Monsanto with the exception of the 2000 annual reports.

Name	[MonLTS96]	[MonLTS97]	[MonLTS98]	[MonLTS00]	[hbr-rs97]	[Ndisk98]	[Ndisk99]	[Ndisk00]
RawText	2111	2799	1658	1222	4610	714	779	275

Coded Text	802	1138	704	509	1898	305	331	122
market (ppm)	7713	6458	12687	5469	2669	9421	3699	10381
finance	7	21	10	4	5	4	3	1
compete	6	4	6			2		
strategy	4	2	3			1	1	
business	20	6	19	2	2	1	4	
focus	4	7	5	3	1	2		1
tech	11	5	21	5	4			
change	14	12	9	1	4	3	3	1

We also believed that in this business speed would be critical getting to market ahead of our competitors with the right traits in the right germplasm in each key [MonLTS98]

to collaborate seamlessly with a large number of seed companies to get the crop and market coverage we needed to beat the competition to market . [MonLTS98]

structure in place to commercialize our new marketing technologies and products . [MonLTS00]

We also have the global our experience in chemicals seeds genomics and biotechnology . This allows us to offer our customers customized solutions to their farming needs . . [MonLTS00]

We have 14700 people committed to delivering value for our patent expiration for Roundup by fueling its growth and shareowners and dedicated to delivering on customers our promises consistently . [MonLTS00]

worldwide . We are working with our customers tillage con till systems . [MonLTS00]

import grain grown from Roundup Ready seeds into Europe and -3 continue to expand our markets in Asia with the approval of Bollgard insect protected cotton in India . [MonLTS00]

We are FOCUSED on fewer but better opportunities DEDICATED to delivering value to and consumers and COMMITTED to consistently meeting our financial promises and our shareowners customers social responsibilities . HENDRIK [MonLTS00]

results Today Novo Nordisk Enzyme Business is an undisputed leader for industrial enzymes on world markets and a leader in the development of sustainable industrial processes . Today Novo Nordisk Health [Ndisk98]

Care is the world leader in diabetes care based on our tradition of innovation and service in this field and our strong position within insulin and convenient delivery systems . We [Ndisk98]

gone on to introduce NovoNorm®/Prandin™ a new oral treatment of Type 2 diabetes in several markets . Our promising discovery and development pipeline proves our ability to innovate [Ndisk98]

and other markets while we intend to license out

We will remain a strong contender in the European market our HRT products in the US [Ndisk98]

Novo Nordisk has over the last few years which have now been hit by adverse economic

established operations in several emerging markets developments . [Ndisk98]

Competitors have chosen to dismantle or withdraw . Novo Nordisk has decided to stay . This

their operations in these markets certainly puts pressure on our earnings [Ndisk98]

Enzyme Business continues to achieve growth

despite the adverse market and economic conditions of the last two years . [Ndisk99]

leader in all segments of the industrial enzymes

In 1999 Enzyme Business became the market market including animal feed . This undisputed [Ndisk99]

including animal feed . This undisputed position

In 1999 Enzyme Business became the market has been attained through hard work a

leader in all segments of the industrial enzymes market determined [Ndisk99]

need to pay attention to the needs of all our

stakeholders be it shareholders our customers . employees or society at large . [Ndisk00]

have told us that a cure for diabetes is their

And our customers greatest wish so it must [Ndisk00]

of us at Novo Nordisk are getting a clearer view of and of how our work makes a difference to them

the wishes of our customers . With this insight comes [Ndisk00]

products areas are unlikely to become such broad however we will continue these businesses as

multi product businesses as our diabetes care franchise our products make a difference to patients and [Ndisk00]

I and me

The use of I, or me, by Shapiro declined over the period covered by these reports, and was not used at all by his successor. Novo Nordisk did not contain the pronouns I or me until 2000, but then they were used much more frequently than by Shapiro.

The way in which it is used however is different. Novo Nordisk is using the term as part of a personal affirmation of some value based statement:

can really make a difference and diabetes is one such area . So why do I wish we could defeat diabetes? After all this is where we are making our living

Monsanto used it in a range of ways, from introducing the annual report:

In this letter I want to explain why we're taking this step and where we think it will lead

To defending an unpopular business decision:

We reduced the dividend after the chemicals spinoff . Many of you didn't like that decision . At this time for reasons I hope this report makes clear we strongly believe that the cash we generate is better invested in our future than paid out as dividends.

Name	[MonLTS96]	[MonLTS97]	[MonLTS98]	[MonLTS00]	[hbr-rs97]	[Ndisk98]	[Ndisk99]	[Ndisk00]
RawText	2111	2799	1658	1222	4610	714	779	275
Coded Text	802	1138	704	509	1898	305	331	122
me (ppm)	2269	1360	577	0	10265	0	0	6920
finance	2	2			6			
compete								
market	1	1	1		2			
strategy	1				1			
business	6		1		13			
focus	1				8			1
tech	1				22			
change	2		1		16			

Sustainability

The term sustainable is used in many senses in business discourse, and it can occur in different contexts. First, it can be used to refer to the financial viability of the business, and both Monsanto and Novo Nordisk use the term in this sense:

We know that over time the only sustainable source of competitive advantage is a working environment that enables our people together to outperform their people . We're trying to create that kind of [MonLTS97]

Our sustainable competitive edge is built around personal qualities such as inventiveness enthusiasm motivation the ability to communicate and the ability to consistently identify the smartest solution [Ndisk99]

Sustainability can also be used in the sense of environmental sustainability. In this sense there are further graduations of meaning, partly created through context and association. Novo Nordisk refer to improved performance by their organization:

have managed to change in a way that nobody thought possible and we have delivered the results we promised – financially as well as on environmental and social bottom lines . [Ndisk99]

Both organizations refer to more sustainable processes for their customers:

And our exploratory work in biopolymers biodegradable plastics and fibers that may one day be grown in crops may point toward more sustainable industrial practices as well . [MonLTS96]

Today Novo Nordisk Enzyme Business is an undisputed leader for industrial enzymes on world markets and a leader in the development of sustainable industrial processes . [Ndisk98]

The sense of this use can be moderated by the association with some form of gain for the organization. Only Monsanto drew this association:

Boligard and YieldGard for insect resistance create value for farmers by helping them control insects and weeds more effectively at lower costs and more sustainably . Other traits however will create value further downstream for example by improving the nutritional qualities of food or animal feed or by creating efficiencies [MonLTS98]

agriculture from the chemical era into the biological era . This change will let farmers produce crops more efficiently and in ways that are more environmentally friendly . [MonLTS00]

Monsanto also pointed out that technologies might be able to provide benefits in the sustainability domain in general:

We also suspect that a life sciences company may have something useful to contribute in addressing issues of environmental sustainability . Certainly the prospect of a more sustainable agriculture is one of the promises of biotechnology [MonLTS96]

faster cheaper development of knowledge that can be practically applied to solve complex human problems in areas such as agriculture nutrition health material sciences and environmental sustainability [MonLTS97]

Finally, Monsanto chose to point out that the issues of sustainability may provide a business opportunity, one, presumably that Monsanto should take advantage of :

The goals are to help people around the world lead longer healthier lives at costs that they and their nations can afford and without continued environmental degradation. When we considered the implications of this convergence we reached two basic conclusions.

First the intersection of these technologies and goals defines an extraordinary set of business opportunities. [MonLTS97]

Con till dramatically reduces the rate of soil erosion thereby addressing a major issue in agricultural sustainability around the world. Con till is our biggest growth opportunity for Roundup and one that relies on our unique approach of integrating our three [MonLTS00]

Conclusion

When Monsanto attempted to develop an image as a sustainability organization, it chose to define this based on the application of a technical discourse to the development of crops for drought resistance, crops for insect resistance, crops with increased yield, integrated agricultural systems for conservation tillage which reduced land degradation. Monsanto's apparent belief in technology, whilst built around a vision for the company and providing the company internally with a strong identity, was not shared by other publics. Reasons for this lie in an understanding of some of the paradoxes of late capitalist society and the mistrust that has built up around both multinational

companies and around science and technology. The question remains however as to why Monsanto has faced such a backlash whilst, for example, Novo Nordisk has not. The answer to this lies both in the definition of each firm's publics and in the extent of the discourse adopted by Monsanto.

Monsanto failed to understand that their discourse, which was couched in terms of a strong business rationale, i.e. the exploitation of market opportunities, does not reflect the values of the sustainability discourse. In attempting to move Monsanto's image to the high ground of sustainability, Shapiro failed to recognise the identity of Monsanto as a science company. Monsanto's discourse is full of paradox. Whilst any order of discourse (Fairclough, 1995) is made up of a multiplicity of discourses, Monsanto here attempted to combine two fundamentally discourses: that of business and technology and that of sustainability. Its spectacular failure was in no small part due to the conflict inherent in this attempt. For organisations such as Novozymes success is in not least due to keeping its discourse within the boundaries of the business arena and business discourse. This strategy is clearly reflected in Monsanto's discourse following the departure of Shapiro.

This leaves us with two conclusions: firstly, that organisations are best served by keeping their own discourse clearly within established discourse practices. This rather negative conclusion reflects current practice in business's response to sustainability, which supports an incremental approach to changing the business discourse and discourse practice. The more successful organisations appear to be those who do not challenge radically existing discourse practices and do not attempt to transgress discourses. Secondly, that if organisations want to break these traditional boundaries, and much development in the field of gene technology points to this, then organisations need to

engage their public in constructive dialogue in order to overcome the inherent mistrust that exists around the application of technology in the field of sustainability.

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