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Part 1: Literature Review

1.1. Introduction

Sustainable development is a malleable concept. For some (such as Mebratu, 1998:493 & 503) this is inherently problematic given the power of dominant sustainable development beliefs to shape that most mysterious of things – the future. On the other hand, Desai suggests that scratching beneath the meanings ascribed to sustainable development gives useful insight into the foundational beliefs of their proponents (in Dresner, 2002:64), while Jacobs highlights the opportunity to disguise “radical political ideas” (in Hattingh, 2001:24).

Three of the articles reviewed here tackle sustainable development conceptually; sustainable development (SD) as philosophy (Hattingh, 2001), systems (Gallopín, 2003) and process (Lichtman, 2003 *draft*). Refreshingly, Lichtman proceeds to reveal his own hand by presenting a detailed proposal for doing SD.

The approaches to SD of the remaining five authors are arrayed along a spectrum¹ of social, economic and ecological vantage points. This review spans the deep ecology approach of Macy and Young Brown (1998), Norberg-Hodge's (2000) call for a local antidote to economic globalisation and its consequences, an exploration of the relationship between financial markets and sustainable development by neo-liberals Schmidheiny & Zorraquin (1996), Goodland and Daly's (1996) version of the limits to growth argument and a review by Wise (2001) of literature addressing the social components of sustainable development. According to Mebratu, there are inherent “epistemological flaws” (1998:512) in unbundling the different parts of what Gallopín calls the socio-ecological system (2003:17) and failing to recognise that the relationship between “the parts” and “the whole” is the primary locus for intellectual work (1998: 513). The systems thinking approach will thus receive particular attention.

Part one will briefly introduce the various arguments, seek out connections and contradictions, and produce a preferred position on which the remainder of the paper will be based. Some of the analytic devices employed in this literature review are borrowed from Bartelmus (1994) and Mebratu (1998).

1.2. Conceptual Pathways: From entry points to end points

1.2.1. The conceptual terrain of sustainability

Given that sustainability as a concept is both “dangerously vague” (Daly in Mebratu, 1998: 503) and hotly contested (Dresner, 2002), this review will accept Desai's invitation to scratch under the surface of the definitions provided by each writer in order to gain a deeper understanding of their thinking.

Ethics and principles are a widely assumed reason for engaging with the issue of sustainable development – it is the 'right' thing to do. Hattingh (2001) bases his argument on the moral imperatives inherent in intragenerational justice, intergenerational justice and respect for all life. Lichtman's (2003) gaze stretches beyond this, to the threat that global inequality (which he also treats as unethical) will erupt into global insecurity. This shifts the argument from one of altruism to

¹ Admittedly too linear a term for what is more aptly a triangulation, the subject of later discussion

self-interest. Macy and Young Brown argue that altruism is the product of a narrow sense of self – if we broaden it to an ecological sense of ourselves, then “protection of free nature is felt and conceived of as protection of our very selves” (1998:47) thus ushering in ecocentric versus anthropocentric incentives for sustainable development. Mebratu suggests that anthropocentricism is a necessary precursor to the ecocentric position (1998: 516).

The anthropocentric position is anchored in concern about the boomerang effect of unsustainable human behaviour on human well being. Goodland and Daly's exploration of various configurations of substituting natural “assets” (1996:1007) is borne out of an adapt or die mentality. Impending disaster is palpable in Schmidheiny and Zorraquin's (1998) book published on behalf of the World Business Council for Sustainable Development, which provides a strong push in the direction of alternatives. The capitalist contradiction between the promise of limitless growth and the looming threat of limited natural resources casts a shadow over both texts. The literature surveyed by Wise is motivated by recognition that high economic growth does not always improve quality of life. Although these writers address the social component of sustainability, they are more attuned to social systems (such as democracy) than humanity *per se*. Norberg-Hodge (2000) in her capacity as Director of the International Society for Ecology and Culture (ISEC) is more patently concerned with the impact of global economy on people, culture and sense of community.

1.2.2. Epistemology

The wide territory of ideas that make up sustainable development thinking invites expansive intellectual work which can generate paradigm shifts and translate into innovative strategies. Applying the assumptions and methodologies of one approach (be it ecological, social or economic) closes thinking down (Mebratu, 1998:513). By contrast, systems thinking opens new possibilities – as living systems theory (Macy and Young Brown, 1998:40) and Gallopín's work (2003) demonstrates.

Some writers in the selected literature make the mistake of focusing on one component of SD, in the interests of a second, using the discourse of a third. For example, Goodland and Daly state that “the three types of sustainability – social, environmental, and economic - are clearest when kept separate” (1996:1002) and explicitly set out to address environmental sustainability. Their ultimate concern, however, is social, as demonstrated in their concluding statement: “The monumental challenge of ensuring that possibly 10×10^9 people are decently fed and housed within less than two human generations – without damaging the environment on which we all depend – means that the goal of environmental sustainability must be reached as soon as humanly possible” (1996:1016). In the process of building an argument, they rely heavily on the language of economics (e.g. “*liquidating natural capital*”: 1004, italics added). The result is a confusing tangle of perspectives which obstructs engagement with the sustainability challenges they pose. Segschneider (2002:61)² observes that “Justice has been separated from economic development. Democracy has been separated from environmental protection. Environmental protection has been separated from fairness. But they are equally important variables in sustainability”.

Economics emerges from the readings as the discipline with the most powerful voice. Sociologists, psychologists, anthropologists and social workers seem to have little to contribute by comparison. As a quantitative discipline, economics translates more smoothly into policy and strategy than the “softer” qualitative social sciences. This is apparent in the close connection between analysis and recommendations offered by economists such as Sen and Chambers and programme responses

² Segschneider's work in preparation for the Johannesburg WSSD is not part of this review, but his 2002 critique, “The Limits to Sustainable Development” is useful here.

by the UNDP³ and ILO⁴ respectively (Wise: 49 & 53). Segschneider writes: “The central role of the economy permeates all sustainability decisions at the government level and results in a separation of sustainable development agendas from *qualitative* objectives such as environmental protection and social development” (2002:61). This is not the place to delve into ontology, save to express concern that the way quantitative academics think about situations that are very real for the people at the other end of the dataset can make social “problems” less real and, hence, their solutions less urgent.

The economy attracts a lot of blame, as if the damage wreaked by economic growth were divorced from human agency. Norberg-Hodge (2000) and Goodland and Daly (1996), for example, reiterate the destructive impulses of the global economy. Again, Gallopini's work (2003: 15) is useful in terms of positing a socio-ecological system which implies that the economy is a subsystem of the social system and therefore squarely within human control.

1.2.3. Means and ends of sustainable development ideas

Having explored some of the entry points into sustainability thinking and the positions that various writers take up within it, this paper turns to the different ends they seek and the means they advocate for getting there.

Means and ends suggest a linear process. Linear thinking is another of the errors Mebratu identifies (1998:514). Many of the writers in this review fall into this trap in the way they express ends and means, and in terms of their cause and effect reasoning. This is not in itself problematic, but as a collection of texts the linear arguments cross each other, creating a web which ensnares those seeking a clear path towards sustainable development.

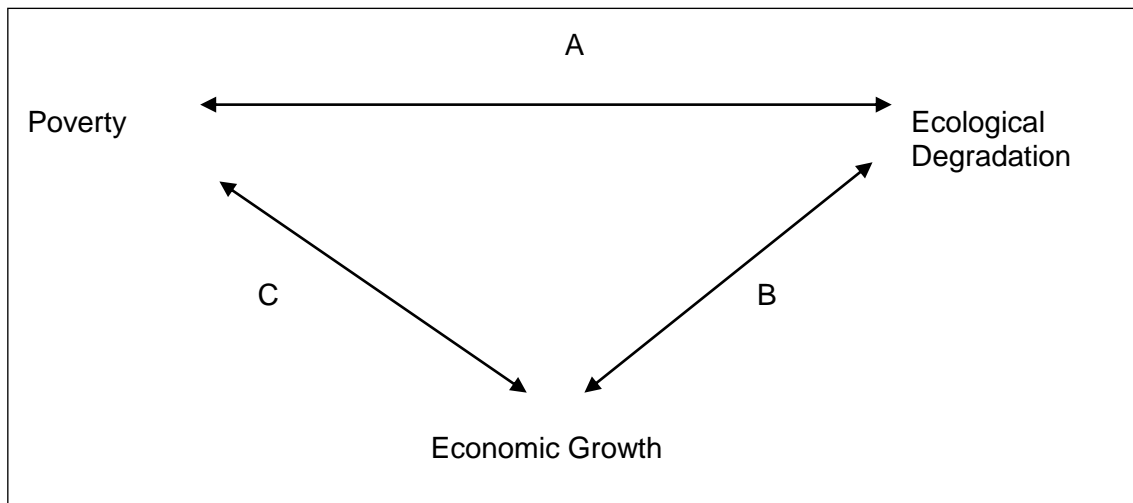
Consider the following examples: The highly interventionist stance adopted by Goodland and Daly proposes trade-offs between different forms of capital and between wealthy and poor as a means to sustain natural resources. Lichtman, on the other hand, considers sustainable livelihoods for all the major object of the SD exercise, relegating sustainable resource use to an instrumental role (2003:8). On participatory processes, Hattingh warns that participation can become the dominant end goal instead of simply the means, which risks “elevating whatever emerges ... to the level of unquestionable interpretations of sustainability / SD” (2001:15). Sen treats political freedoms as both an end goal and a means to development (1999:10). Thus, ends and means are not linear but circular.

Perceiving instead the interplay of ends and means and causes and effects, an approach compatible with systems thinking, reveals the relationships between the different parts of sustainability. Clayton and Radcliffe (1996) explain that systems thinking offers an alternative to the “one-dimensional mapping” described above.

Diagram 1 below demonstrates the cause and effect relationships between the social, ecological and economic components of the unsustainability problematic.

³ United National Development Programme

⁴ International Labour Organisation

Diagram 1: Cause and effect relationships between social, ecological and economic components

The three points on the triangle are poverty⁵, ecological degradation and economic growth (in the capitalist model). Both poverty and economic growth fit into the 'socio' part of Gallopin's socio-ecological system.

Degraded ecological systems deepen the poverty trap while the most severe forms of poverty can degrade the ecosystems on which human life is dependent - as can excessive forms of wealth (line A; Bartelmus, 1994: 6 & 23). Economic growth impacts negatively on the environment, and environmental damage limits economic growth (*ibid*: 29 & Hattingh, 2001:26). Line C represents the cause-effect relationship between poverty and economic growth. Distribution patterns of the material benefits of capitalist economic growth exacerbate poverty, while unemployment and the other faces of poverty inhibit economic growth.

1.3. Substantive debates

Some of the core debates that surface in the selected texts concern natural limits and how to measure them, the relationship between development and economic growth, where the power for a sustainable future lies, and how this power might be exercised. Stepping back from the immediacy of these debates to see the bigger system begs questions about time, scope and scale of sustainable development and helps to synthesise the material under discussion. The substance of sustainable development is located here, creating possibilities for grappling with the relationship between resource use from consumption.

1.3.1. Natural limits

While there is growing acceptance of natural limits, the lively debate has shifted to what those limits are, how to measure them, and whether they are fixed. Generating information to close uncertainty gaps about thresholds and carrying capacity is fraught with ambiguities. Choice of methodology depends on whether the questions are political or ethical and whether they require quantitative or qualitative answers. (Hattingh, Bartelmus:27-29, Goodland & Daly). Is it about which natural resources are depleted, to what extent and the consequences thereof (Bartelmus,

⁵ Defined here as income poverty and quality of life

1994), or is it also, as Hattingh (2001) contends, about identifying what is valuable enough to warrant sustaining - and the moral foundations of these beliefs? Hattingh counters Bartelmus' argument for common and clearly understood measures of ecological impact, such as monetary value, on the basis that that this approach promotes inter-substitution (2001:18).

Faced with the tough implications of finite natural resources, many SD thinkers (following Brundtland's 1987 precedent) place hope in the potential of technology, social organisation and the free market to push these limits (Hattingh, 2001: 5; Dresner, 2002:67; Schmidheiny and Zorraquin). Gallopin agrees that limits have some elasticity (2003:21) but remains coy about whether the pace of technological and institutional progress can match expectations.

I submit that while social institutions may tend to chaos and thus display unanticipated behaviour (Clayton & Radcliffe, 1996) they have no volition of their own and so sit, like the economy, within the orbit of human control. Ambivalence about technology lies its potential to advance renewable resource and resource-efficient solutions should the necessary investment be made, versus the (continuing) legacy of environmental and social damage of industrialisation. It depends in whose interests technology - as a major source of profit - is wielded (Lichtman, 2003:14).

1.3.2. Growth versus development

If one accepts from the dominant arguments presented in the literature under review that there are inherent ecological limits, that economic growth is the main driver of ecological destruction, but that quality of life for all is the key goal of sustainable development, the fundamental question is about the relationship between (social) development and economic growth.

A more nuanced understanding of growth facilitates exploration of this relationship. Gallopin distinguishes material from non-material growth and identifies the potential for production inputs to shift from material resources to non-material knowledge (2003:25). Goodland and Daly, branded full-world economists (by Bartelmus:10) define growth as an increase in size versus development as advancement or expansion (1996:1004) and argue for separating the contributions of "quantity change (throughput)" from "qualitative improvement" to growth (*ibid*). Norberg-Hodge's ideas about local trade offer a way of thinking about different economies of scale as does Lichtman's models of sustainable development (MSD) project design (2003: 22 & 35 – 36).

Inequality means stretching these ideas still further, and finding equations of balance. Some writers refer to the need for equitable distribution of resources without considering the trade-offs required. Both Goodland & Daly and Gallopin advocate limiting consumption by the wealthy to compensate for increased consumption by the poor, and slowing down population growth.

1.3.3. Who holds the power for change towards a more sustainable future?

Perhaps one of the greatest challenges posed by sustainable development is to identify where power for change is situated. The issue of leverage will therefore be explored in the case study. The literature reviewed here shunts responsibility back and forth. A number of writers cite the pivotal role played by policy makers. In Hattingh's analysis (2001), national policy-making is paramount, while Lichtman criticises traditional macro-policy for being too "distant" and "unaccountable" (2003:21).

Schmidheiny and Zorraquin demonstrate that financial markets are gaining increasing power, assuming control previously held by national governments: "Thus if the market is taking over from

governments as the co-ordinator of human progress, it is crucial that the markets tend towards sustainability” (1998:7). However, Wolfensohn, the then-President of the World Bank, contradicts this view in the book's foreword: “We hope that we can play a useful role in ... assisting governments to put in place incentives that ensure that economic growth is sustainable” (1996: x). This hints at denial about where power lies, which will obstruct efforts to use power wisely in charting a sustainable future.

Norberg – Hodge (2000) holds that the power of “the people” should not be underestimated. If, however, national governments have been rendered impotent by the giants of global trade (multi-national corporations and the WTO ⁶) as she argues, this raises questions about where responsibility lies for holding the tension between “the people” and these giants and so bringing about lasting change. Which brings the argument full circle, back to national policy-makers.

1.3.4. Conditions for change

Change in behaviour tends to be preceded by epistemological shifts – evolving ways of thinking about the world. This is a central theme in Macy and Young Brown's chapter about cycling perceptions of reality: “And so we awaken today to a new kind of knowledge, a developing comprehension of our radical interrelatedness to everything in the universe”: 40. Streeten (1995, in Wise, 2001:47) characterises the development debate as “a genuine evolution of thinking and not a comedy of errors, a lurching from one slogan to the next” suggesting a similar degree of optimism that we are able to move from one form of knowledge to the next, and thus recognise and grapple with the challenges of sustainability. Gallopin's (2003:18) principles of sustainable systems provide theoretical glimmers of hope - the socio-ecological system can master capacity of response, including self-reliance (to change itself) and empowerment (to bring about change in other systems). Simply grasping this at the intellectual level may represent one of the homeostatic modifications necessary for ongoing adaptation to changing circumstances.

Sustainable development thinkers and actors suggest a plethora of separate solutions (some of which have received attention in this review) from the 'hidden hand' of the market to macro-policy, exported technologies, population stabilisation, environmental accounting practices and capacity building. All may be necessary but are inherently insufficient conditions (Lichtman, 2003).

Integration offers new hope. Lichtman (2003: 26) writes that “The challenge of sustainable development planning is one of integration; how to integrate economic and environmental concerns (and which ones), how to integrate the interests of different groups, and how to integrate technical, political, and social knowledge”. Hattingh comments on the importance of integration (2001:14): “Implementation here has to do with integration, in theory and practice, or environment and economy, as well as development on the one hand and environmental management and conservation on the other... . The central point is ... that this integration should take place on a policy as well as an institutional level, and that this should lead to real transformation of current institutions, practices and personal lifestyles”. Gallopin discusses the necessity of “integrating economic, social, political, cultural and ecological factors” (2003:7).

1.3.5. Treatment of scale, space and time

Just as the systems approach enables sustainable developers to see the bigger picture, so a figurative step back from the texts of this literature review enables patterns to emerge. In these

⁶ World Trade Organisation

patterns of time, scale and space, new configurations between the different parts of the socio-ecological system allow what had seemed fixed and thus unsustainable to take on different relationships to one another. In this way, resource use unhooks from consumption and new possibilities arise.

All the authors discuss matters of space, scale and time. There is broad consensus that different regions require different sustainable development solutions (Lichtman, Goodland & Daly, and Gallopin). Bridging the scale differential between individual lifestyle and a shared global destiny is a core theme for Lichtman, Norberg-Hodge and Schmidheiny & Zorraquin. Inherent short-term tendencies of politics and profit versus the long-term needs of a sustainable world occupy Chambers (in Wise) and Norberg-Hodge, while the cycling of time and meaning percolates through Macy and Young-Brown's text.

1.4. Concluding comments

The combined contribution of Gallopin's conceptual work and Norberg-Hodge's argument for change on a local scale provide the most appealing set of ideas for thinking through the challenges of a more sustainable future, and re-thinking the relationship between resource use and consumption. Lichtman's proposal for scaling up and linking local sustainability projects makes the (potentially too abstract) discussions of scale, scope and time more concrete.

While poverty and inequality arguably represent the greatest challenges to post-Apartheid South Africa, there are other crucial aspects of human development to address. Sen's (1999) five freedoms significantly open up the field of thinking. Beyond this, however, self-esteem and identity at the interpersonal level, and prejudice and violence at the interpersonal level profoundly impact on the quality of human and ecological life. Violations of human rights, state aggression and war present significant threats to a sustainable world, yet receive little mention in the literature. The ideas contained in Max-Neef's human scale development⁷ are valuable from this vantage point and will be adopted in part 2 of this paper.

A sustainable world is one which recognises interdependency – especially between the wealthy and the poor. Our futures are tied. This requires that we see ourselves as part of a bigger system, that any adjustment in that system will impact on all of us, and that wealth and poverty are polarities of each other.

One way to counteract the multiple geographical, material and psychological divides is to make visible other players in the system and demonstrate interdependency. It is at the local level that these interdependencies most profoundly reveal themselves and thus where opportunities for sustainable development are strongest. Shifting trade relations to small scale production and local markets is a key mechanism for untangling resource use from consumption in the interests of meeting the different needs of various players in the system, and thus meeting the sustainability needs of the entire socio-ecological system. The case study will explore these possibilities in greater detail. The challenge is grow local initiatives, at a pace that galvanises interest and support without overextending limited resources (natural resources or human capacity to cope with change), while leveraging sufficient political and economic muscle to protect, regulate and promote change efforts.

⁷ Premised on nine fundamental human needs, listed in the case study (Clarke: 1993).

Part 2: Case Study

2.1 Introduction

Sustainable development is about change (Hattingh, 2001; Lichtman, 2003; Gallopin, 2003). Recognising the need for change, generating choices for different change pathways, initiating change at the most appropriate scale, then scaling up by leveraging other change mechanisms, while all the time building resilience to absorb the impact of change. Inherent in the change process towards a more sustainable future is the need to challenge fundamental assumptions about the relationship between resource use and consumption and to better understand the interdependence of the various parts of Gallopin's socio-ecological system (2003:15).

Gallopin unclutters the space in which to think about the concepts of sustainability and sustainable development by suggesting that sustainability is “dynamic preservation of the essential identity of the system amidst permanent change” (2003:35). Sustainable development is “a process of directional change by which a system improves through time in a sustainable way” (ibid) such that it “redefin(es) progress” (ibid: 20), away from the conventional notions of material, quantitative growth to which development has become tied. If it is directional, to what end?

Taking a step beyond poverty alleviation, human development or social capital (Wise, 2001), I contend that the end to which we should steer sustainable development is one which addresses the full spectrum of needs conceptualised by Max-Neef⁸. These needs are subjective, material, non-material, quantitative and qualitative and thus sit comfortably within the systems approach at an intellectual level, while embracing the richness of human complexity and difference. Where the inputs required to satisfy certain needs are finite, re-balancing is required between those who have much and those who have little. Thus, at the material and, in my view, most pressing level of need, I argue that this necessitates change throughout the social subsystem. As poor people claim the larger share of the world's natural resources to which they are entitled, this will need to be balanced by a shift in consumption attitudes and behaviours by those who have enjoyed relatively more material wealth.

I submit that a more sustainable world is possible if initiatives rooted in subjective meaning and action at the local level can be scaled up or replicated and enabled by the policy environment at the macro level. Part 2 of the paper will explore this set of assertions with the aid of three key concepts: the *scale* at which change takes place, the *temporal* aspects of change (pace and speed, as well as short – and long-term change orientations) and the dimension of *space*. The latter refers to the different guises of change in different regions and the legacy of spatial planning. Sustainable development principles of intragenerational and intergenerational justice relate to space and time respectively (Gallopin, 2003:7).

Will the degree of change we choose to undertake be sufficient or will change be imposed in the context of a growing sense of alarm about the future – and with what consequences? Different configurations of scale, space and time either widen or narrow the choices available, and strengthen or weaken leverage for change. Choice is understood here as the exercise of control over change in the system(s) in which one is located, while leverage concerns engendering change in others systems and subsystems. Gallopin (2003:20) writes that “... sustainable development must aim... also to increase the social and ecological capacity to cope with change, and the ability to retain and enlarge the available options to face a natural and social world in permanent transformation”.

⁸ The nine “fundamental human needs” identified by Max-Neef are: subsistence, protection, affection, understanding, participation, creation, idleness, identity, and freedom (Clarke, 1993:10)

This hypothesis will be applied to the case of the Ethical Co-op, a new organic enterprise in Cape Town, to which I subscribe. First, it is worth contextualising the concepts of space, scale and time within a South African location, where these dimensions take on a unique configuration, presenting opportunities and challenges to sustainable development. South Africa is twelve years into democratic rule, with implications for relatively open and fresh approaches to policy change and deep engagement with the tough issues related to the historical legacy of Apartheid. One of the most pervasive of which is the separation of space according to race. Governance is characterised by a tension between central control and decentralisation of service delivery, which requires local government to plan, administer and regulate resource use in the context of the deep inequalities of this spatial legacy. The decentralisation process in South Africa is mirrored at the international level, where the World Bank has acknowledged decentralisation as “one of the most important forces now shaping development” (Lichtman, 2003:21).

2.2 The story of the Ethical Co-op

The Ethical Co-op was initiated a year ago (in March 2005) by a group of Capetonians “passionate about eating and distributing organic food in Cape Town”⁹ and frustrated by the lack and high costs of organics. As an organisation, it is still feeling its way towards a formal vision, but, informally, it is to promote an organic lifestyle by providing access to organic goods and education and stimulate greater “self-sustainability”¹⁰.

Since March 2005, when co-founder Beau Hogan made the first delivery to four customers, the number of registered customers has grown to over 1000. Weekly orders peaked at 140 in January 2006. Delivery areas have been broken down into smaller units as each one has achieved a sustainable size. Customers order on-line, from a choice of vegetables, fruit, cereals, pastas, bakery items, dairy products, toiletries, household and hardware goods and can subscribe to local publications and food gardening courses. Information about the organic status and source of the products is available at the click of a mouse.

The Co-op team comprises the two co-founders¹¹, an IT specialist, two financial managers¹², and a growing group of local distributors. The intention from the start has been to have a non-hierarchical structure, and to operate according to shared principles of “integrity, transparency and free access to information” (NM). They meet on a weekly basis after completion of the delivery cycle to discuss their service, systems and relationships. In a time of significant growth, the Co-op has been constantly confronted with different problems to understand and address: “As we've ironed out one set [of problems] and then grown, it's brought a new set. So we've been chasing our tails” (NM).

The profit – sharing formula has recently changed from one in which the distributors received 75% of the profit on each product, IT 5% and the Co-op 20%. On the basis of a vote, distributors agreed to take a drop, to 50% of the profit, while the IT and accountants' share each increased to 7%¹³. The remaining 36% will go to the Co-op towards rental, buying more stock and expanding its infrastructure.

A wide range of producers, almost all of whom are small and local, supply the Co-op with goods. In many cases, the Co-op is their biggest outlet. “The Co-op has opened up a market that didn't

⁹ Noel Marten, distributor: interview. Hereafter referred to by his initials (NM)

¹⁰ Gwen Currie, co-founder: interview. Hereafter referred to by her initials (GC)

¹¹ One of whom left during the course of preparing this case study

¹² A job-share between a married couple

¹³ Indicating a greater investment in systems as the organisation professionalises

exist before, providing the potential to turn their smallholdings into viable concerns” (NM). The producers set their own prices and can access the website to control how their goods are displayed, check orders and do stock control. Orders close each Monday afternoon, suppliers prepare their stock on Tuesday and deliveries are made to customers' homes on Wednesday. “We want their produce to be as fresh as possible” (NM).

Given the bureaucratic constraints to gaining certification for organic food production, some of the small local producers are not yet certified. This is made clear on the website, but with the Co-op's endorsement that they use organic farming methods. “We know the suppliers and their commitment to organics. We can put our guarantee to it, which supermarkets wouldn't. We are very transparent with our customers about what has certification and what doesn't so that you have choice” (NM).

Organic standards of food production are cited as the major stumbling block to township based community gardeners' participation in the Co-op. While there is an expressed interest to buy from community gardens, organic criteria such as soil testing have thus far prevented township suppliers from entering the Co-op market, except in an ad-hoc fashion. Abalimi Bezekhaya, a local NGO, is currently investigating group certification for organic community gardens. The Co-op's customers are almost all middle class and white. One impediment to a broader customer base is that orders can only be made on-line. “My experience in Europe is the same; organics is a middle class growth sector” (NM).

In summary, the scale at which the Ethical Co-op functions is small and local, and the geographical space into which it is expanding reflects its middle class customer base. While the pace of operational growth during the first year has been rapid, and immediate gains have been realised by customers, suppliers and distributors, the Co-op's eyes are on long-term change towards self-sufficiency.

2.3. Assessing the Co-op on its own terms

As a first step towards analysing the material of this case study, it is fair to measure the Co-op's work in terms of what it intends to do, before measuring it in the terms imposed by this paper. I draw on my subjective experience of the Co-op in the first part of this assessment. The second part applies the dimensions of scale, scope and time to the process of change implied by sustainable development.

In a systems analysis, outputs indicate system performance (Gallopín, 2003:10). The intended outputs (relating to the service inputs described above) are expressed as: access to organic foods, an excellent service, educated customers who, ultimately, will shift to more “organic, self-sufficient” lifestyles. The latter output refers to changes in the relationship between resource use and consumption.

My membership of the Co-op over the past eight months has had a series of (often-unanticipated) knock-on effects on my lifestyle and the way I think about consumption. I visit shops and malls less often, which affords me more time and more equanimity. When I do shop for extra items, I go to family owned shops within walking distance. I spend less money on groceries each month; the choices I make on-line are more considered, displayed in a running tally on the screen. The quality of the vegetables inspires more creative cooking and so I eat out less frequently. I am more conscious of waste and have started a compost bin. Perhaps most unexpectedly, having opted for shared delivery with another household in our road, my sense of being part of a community is greatly enhanced by weekly contact, negotiation of logistics and neighbourly chats about food and more ecologically responsible lifestyles.

These outputs are muted by the fact that I am not (yet) a serious convert to organic food – for example when it is markedly more expensive than its non-organic equivalent. I cannot claim to be more self-sufficient as a result of belonging to the Co-op. The impact of the modest changes I have made to my lifestyle will guarantee no one a sustainable future. However, if a critical mass of Woodstock residents made these small adjustment, it could lead to discernible changes in consumption patterns in the neighbourhood, manifesting in qualitatively different decisions about resource use in local residents' association meetings.

Less visible inputs to the Co-op system are communication and attentiveness to the needs – material and non material - of others. “One of the greatest things about the Co-op is the people... for some reason they've been drawn to the Co-op, something about the way we operate has resonated with their values” (GC). In my experience of the Co-op, the outputs include increased trust, and much goodwill. These enhance the sustainability of each of the different relationships within the system, including relationships between members of the Co-op team, their relationship with producers, the relationships they facilitate between producers and consumers and hence, the connection between consumers and the food they consume. The relationship between the Co-op and its broader membership is enhanced by feedback loops, built into the system so that the service remains attuned to the demands made on it. As a customer, I tolerate flexible delivery schedules because I know that the distributor is paid little and is passionate about the principles of the Co-op. On the other hand, I know that a complaint is dealt with immediately, effectively, and personably.

The benefits of belonging not only sustain my membership but encourage me to recommend the Co-op to friends, family, and neighbours, thus expanding the membership base of the Co-op.

The Brundtland report (1987) touted technology as a caveat to natural limits . The Co-op IT system generates immediate order confirmation and an invoice with account balance. Noel Marten reports that IT responses to distributors' needs have cut his administration time down by 50%. “This saves a lot of time and energy, reducing my Telkom phone bills, makes it [Co-op work] more profitable and gives me more time to be with my family in the evenings.” In terms of human scale development (Max-Neef), technology enables Noel to meet subsistence, participation and idleness needs (Clarke, 1993: 10), while cutting down on use of both material and non-material resources.

2.4. Assessing the Co-op in terms of sustainability and sustainable development

Gallopin separates the sustainability of the outputs of a system from the sustainability of the system itself (2003:7) which translates easily into an organisational context. His six “fundamental attributes” of sustainable socio-ecological systems (*ibid*:17), profiles the sustainability of the Co-op at this point in its development¹⁴.

Fundamental Attributes	The Ethical Co-op
Availability of resources	The Co-op is at the point of growth where it needs to invest in infrastructure in order to continue growing, but does not have the requisite financial resources. The human resource component is strong, but team members' time is constrained by the need to do other, better-paid work.
Adaptability and flexibility	Highly attuned to its environment and light-footed enough to make quick adjustments.

¹⁴ From an organisational development (OD) point of view, the Co-op is in the pioneering stage, usually characterised by rapid growth, flexible procedures and visionary leadership (Taylor, undated).

Fundamental Attributes	The Ethical Co-op
General homeostasis: stability, reliance and robustness	Challenged by the departure of the pioneering, highly energetic co-founder at the end of its first year. A new style of leadership and management is emerging as a result.
Capacity of response	Healthy response to change and a willingness to engage with it. Members intuitively apply the principles of organic production to running an organisation.
Self-reliance	Proactive, and far-thinking in its first phase. The challenge will be to branch into different strategies - for example, approaching government as a partner or sponsor.
Empowerment	The outcome of current negotiations about organic certification will provide evidence of the Co-op's capacity to catalyse change in other systems, particularly if it enables township suppliers to access the Co-op market.

Table 1: Sustainability profile of the Co-op

2.4.1 Scale

The Co-op is beginning to push against the edges of its current form and size. This raises questions about economies of scale. The Co-op has discussed closing membership for the time being so that it can consolidate. There is a lot of organisational re-shuffling with the departure of the pioneering co-founder. The remaining members are putting systems in place, starting to record all decisions, establishing financial protocols and considering the costs and benefits of decision-making by a smaller core group. "Probably not a hierarchy in terms of relative importance, but ... in terms of decision-making power" (GC).

All systems have an optimal size when they maximise inputs for the most effective output. It is in this state that consumption levels can rise without a concomitant escalation in resource use. Co-op members, most of whom are themselves gardeners, have a keen understanding of this principle and an expansive understanding of resources, which includes natural resources, time, human energy and skill, as well as capital. With this awareness, it is possible to move beyond the idea of inter-substitution of different types of capital (as recommended by Goodland & Daly, 1996) to genuine resource savings.

2.4.1.1 Scale and choice

Interdependence between natural resource use and patterns of consumption becomes most visible at the local level. As do the human interdependencies between rich and poor, producer and consumer. The Co-op makes these connections tangible. Instead of the yawning global divide between producer and consumer, the Co-op's producers have names and their products have stories. Currently, however, this is a relationship between middle class producers and consumers, which recognises only half of the picture of interdependence. Should community gardens tap into a middle class market, they would become more visible to a particular kind of Capetonian consumer who has disposable income and is capable of thinking constructively about their complicity in the local economy of inequality. The spin-offs of recognising this interdependency could be surprising. As Gallopin notes, "a key feature of the systems approach is the recognition that outcomes are not necessarily predictable since our activities may 'force' a system into a whole new form of behaviour..." (2002:22).

Brokering a relationship between township producers and suburban consumers is a type of redistribution, at a very small scale, which could broaden choice to the benefit of all parties.

Redistribution is an inevitable step towards intragenerational equity (Chambers in Wise, 2003; Goodland & Daly, 1996) but the less painful it is for those with more to lose, the more sustainable it is likely to be.

2.4.1.2 Scale and leverage

How can local initiatives such as the Co-op link up and seize openings for change and what is the right scale for leverage? Lichtman recommends the following guideline: "In general, activities should be organised on the smallest appropriate scale, balancing economic (including environmental) costs, with possibilities for system integration and strengthening democratic resource management" (2003:19). Schumacher (1974) advocates matching scale to the intended result.

As initiatives like the Ethical Co-op burgeon across the country, and the benefits thereof become visible to government, opportunities to lobby for regulatory and policy changes will widen. Norberg-Hodge recommends that national and international policy regulate trade differentially for large corporates and small-scale producers, with the aim of incentivising "grassroots initiatives" (2000: 11) and thus galvanising the shift to localisation of trade. Lobbyists will have to convince government, however, that local small-scale production will not fundamentally threaten the employment or economic benefits that South Africa derives from participating in global trade relationships, or else demonstrate how illusionary these benefits are (Norberg-Hodge, 2000:2-5).

Networking with other local initiatives and contributing to the sophisticated environmental justice lobby in South Africa does not have to be resource-intensive. Links with networks that have strong leadership, regular communication, and more goodwill than territorialism can be highly strategic¹⁵. When this is matched with a receptive environment, small groups like the Co-op can make an impact on policy by endorsing submissions and adding their voices to campaigns.

2.4.2 Space

Corporates, especially multi-nationals, "demonstrate no loyalty to space" (Norberg-Hodge, 2000:3). They follow profit. An organisation like the Co-op is notable for its "intimate understanding" (*ibid*:7) of the space it occupies. It cares for the space and is invested in the people who occupy that space.

2.4.2.1 Space and choice

If a middle class existence is defined by more choice about consumption¹⁶ (whether it is food, property, travel, education, or medical treatment) and if this breeds a culture of more, regardless of the consequences, poverty eradication will hasten the collision between resource limitations and growing consumption. One solution is to shift choice towards the production end of the production – consumption binary. More choice about what to grow also renews agricultural diversity (Norberg-Hodge, 2000:6).

A relationship between producers and consumers who occupy the same geographical space leads

¹⁵ These observations are based on my work with the Western Cape Network on Violence against Women, documented in "Networks: Amorphous, ambivalent and powerful" (2006).

¹⁶ Norberg-Hodge (2000) contends that globalisation limits choice, pointing to the homogenisation of agricultural food production, state policy, and culture (2000: 5-7). While it is true that consumers from London to Bangkok are confronted with the same brands, viewed on a relative scale, consumers with more disposable income and more access to credit have significantly more choice.

to a more direct relationship between supply and demand. Simple, tailor-made technologies and access to subsidies and loans would expand the choices of producers, and, secondarily, the consumers of their products. The Co-op has “given a lot of control and power to our suppliers ... [this] is very important for small producers” (NM). Replicated widely, this could reduce dumping of surplus crops, enhance food security and cut down on the absorption of resources by the multiple (non-productive) intermediaries of longer-distance trade.

2.4.2.2 Space and Leverage

A number of writers in the literature review refer to the wisdom of allowing change processes to be shaped by the specific dynamics and legacies of that geographical place. Lichtman talks about “micro solutions and the macro policy that may help support them” (2003:21).

Given that the Co-op spans the gap between (mostly) local producers and local consumers, it has some leverage to manipulate the space between resource use and consumption. It has made a start by reducing harmful and more wasteful ways of using resources and promoting healthier, more informed consumption. Examples include keeping 'food miles' low, using biofuel, cutting down on unnecessary packaging¹⁷, providing rewards for recycling, removing compost, promoting organic farming (which means supporting non-chemical, less harmful but more labour intensive farming practices¹⁸) and educating consumers about products.

Synergy between such practices and policy change in the same geographical space can propel change. “In the end it is likely to be the awareness and activism of small, civic minded groupings, within townships, suburbs and rural areas, and with leadership from government, labour and business acting in concert who will provide the necessary checks and balances to ensure that the WCPSDF policies, once approved, are actually implemented” (Western Cape Provincial Spatial Development Framework, 2005: 10-7)

2.4.3 Time

“A dedication to learning how rates of change affect the behaviour of social, ecological and economic systems over time is an important part of the process of enabling sustainable development” (Gallopín, 2003: 21). “Small-scale steps require a slow pace” (Norberg-Hodge, 2000:12).

Sustainable development requires an approach to planning which matches strategy with appropriate time horizons. Intergenerational equality requires long-term planning. It is a matter of some concern, then, that both governments and corporates tend towards short-termism (Chambers in Wise, 2001:52; Schmidheiny and Zorraquin, 1996). One of the pitfalls of democracy is that political terms of office are short-term and thus lend themselves to flaws of planning driven by politicians' desire for quick, visible change as evidence of efficacy.

In Porto Alegre, Brazil, urban environmental management relies on meaningful participation by people from each of the 16 districts. The annual process puts informed choice *and* leverage in the hands of local people. Change occurs in the context of relationships and processes, which

¹⁷ The Co-op learned early on that some foods needed more packaging than they had provided, and have reached a compromise position on this, in the interests of keeping stock as fresh and undamaged as possible. “It's easy to criticise supermarkets, but there is a middle ground when there's a trade-off in quality. We're learning...” (NM).

¹⁸ The obvious corollary to natural resource limits, particularly in the South African context, is the abundance of human resources. Organic farming can create more jobs than heavily industrialised agriculture.

presents longer-term horizons to decision makers. (Menegat, 2002).

2.4.3.1 Time and choice

Over time, ideas can move from the margins to the centre (Macy and Young-Brown: 1998). The idea of sustainable development is establishing itself now in South Africa. Resource use issues such as energy (in the wake of electricity cuts in the Western Cape) and petrol are more visible in the media now than at any previous time, accompanied by a groundswell of changing public opinion.

Education widens the choices consumers make - for example, about the food they eat. The mainstream film "Supersize Me" demonstrated the impact of McDonalds fast food on health. A recent SABC documentary on organic wheat production reportedly inspired many people to reconsider the bread they buy. This went beyond food quality, relating to other ethical choices. The documentary showed "the working environment (at the organic bakery) was so much better, because it wasn't just about the profit margin" (GC).

Gallopini identifies three strands of the process of changing towards a more sustainable future, one of which is socio-ecological laws. The other two are "volition" and "understanding" (2003:33)

2.4.3.2 Time and leverage

Organic food production is still new in South Africa. Rapid growth is predicted, with demand likely to outstrip supply. There is strong incentive (in terms of sustainability, commercial viability and unemployment) to shift into labour intensive organic production on a macro scale as quickly as possible. Organic certification systems will be hard pressed to keep pace with the development of the sector. The time is ripe for organic activists to lobby government to subsidise organic production, create opportunities for township producers, and improve bureaucracy and technology so that it enables growth.

2.5 Conclusion

Sustainable development is about change and change requires openness - to new ideas, to recognising the interdependence of systems, and to seeking sources of renewal (Gallopini, 2003). While resource use and consumption are inextricably linked, this openness loosens the relationship between them. Small projects like the Ethical Co-op establish solid footholds into what is otherwise a slippery conceptual terrain, providing more choice, education and the potential to catalyse change on a larger scale when the timing is right. The challenge of the Co-op and other local initiatives is to use the principles of resource efficiency and renewal to nurture their own (organisational) sustainability, while engaging with issues of resource inequality in the geographical space they occupy.

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