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30 years of *IJSE: Festschrift* in honour of Professor John O'Brien: part 9

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Code of ethics and employee governance

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Abstract

Purpose – The purpose of this paper is twofold: first, to add to the debate on governance and, second, to describe a value set theory of the firm.

Design/methodology/approach – The methodology has centred on good governance amongst employees – management and workers alike.

Findings – It is noted that committees are appointed in firms to ensure that good governance is practised across a range of issues to do with audit, remuneration and appointment. However, the debate on governance has largely overlooked the importance of good governance amongst all employees. It was found that governance at the employee level requires a code of ethics that is not just about right and wrong, but emphasises a contractual sense of duty to fellow employees as stakeholders in the firm. This defines the essence of obligation and duty within the stakeholder firm, the s-firm.

Practical implications/limitations – One practical implication of the paper is that the practice of good governance at the employee level should begin by asking whether the employees as rational individuals in a state of nature would freely have agreed to the contract or work arrangement within the firm that obligates them to do X. A value set theory of the firm could assist employees by allocating responsibilities among all employees in such a way as to maximise joint effort.

Originality/value – The paper proffers a new approach to understanding governance and it concludes that every rational being is in the state of being an end in itself – a firm should teach people morality. An s-firm teaches people morality. This is the quintessence of employee governance. The paper should be of value to shareholders, workers, management, trade unions and commentators on the theory of the firm.

Keywords Ethics, Governance, Social behaviour

Paper type Conceptual paper

1. Introduction

Business and society have entered a new world in a new century by the confluence of a range of different factors such as technology, growth of big business, environmentalism and human rights. In this new world, the business entity known as the firm or corporation is consequently changing. The watershed was strengthened by 9/11, politically, and Enron, economically.

The world has truly become a global village wherein work practices and production methods have become more harmonised. A different enterprise culture has arrived characterised by firms offering flexible working hours, minimal fringe benefits, retraining opportunities, subsidised child care – while encouraging tele-working, outsourcing, sub-contracting and part time working practices. It is an enterprise

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culture interspersed with contract workers, contingent workers and "portfolio workers", an enterprise culture within which it is predicted that "the supply of enterprise seems destined to outstrip the demand" (McNutt, 1994, pp. 194-5). It is an enterprise culture that has evolved globally without an ethical foundation.

The purpose of this paper is to focus on the relation between individuals not in terms of "using others", but in terms of duties and obligations. Insofar as they possess a rational will, both management and workers in a Kantian world, are not merely subject to the forces that act upon them; they are not merely means to ends. They are ends in themselves. All means to an end have a conditional worth because they are valuable only for achieving something else – traditionally, profits in a Neo-classical firm. But many employees, either unilaterally or through new firm-specific governance guidelines, are entering a new world of work ethics and work effort.

2. Morally right actions

The clearest example of morally right actions within a firm are precisely those in which an employee's determination to act in accordance with duty overcomes their evident self-interest and obvious desire to do otherwise. McNutt (1994) outlined how the "desire to do otherwise" could impact positively on measured productivity within a company. In this new century, modern firms are engaged in batch production and niche marketing. Smaller production sites, short production runs and a growing division of the workforce by reference to a skills hierarchy and to the duration of employment are fast becoming the norm.

2.1 Ownership

Against this background, there is a need to focus on duty and obligation as the ethical foundations of ownership; by recasting ownership in this way, only then can we proceed to understand governance at employee level within a firm. Social economists have always been emphasising the importance of ethics and the moral sense in organising economic activities (O'Brien, 1991). In particular, there is now the need for an ethical approach that stresses the importance of *idiosyncratic* elements of production within the enterprise. There is a need to focus on employee governance as well as governance at board level. The importance of *idiosyncratic* elements of production has been ignored in the theory of the firm for too long.

2.2 Defining an s-firm

Workers and management are the classic employees. They have a greater opportunity today to become stakeholders in the firm: to become part of the firm, managing themselves, monitoring quality and productivity. The firm evolves as a *stakeholder* firm, an s-firm. This is in contrast to (but not supplanting) the profit-orientated Neoclassical model (Arrow, 1994, p. 7), wherein:

> workers *are not* part of the firm. [T]hey are inputs purchased on the market, like raw materials or capital goods. Yet they (or some of them) carry the information base [. . .] *they are neither owners* nor slaves. There is therefore a *dilemma in defining the firm* as a *locus* of productive knowledge [our italics].

Economic analysis of ownership, for example, concentrates on "the possession of residual decision rights and the allocation of residual returns", Milgrom and Roberts (1992, p. 289). However, the concept of firm ownership should be broadened in order to re-examine employee-ownership, vitiating the more traditional approach to worker-ownership *vis-à-vis* cooperatives.

Since there is no concept of absolute ownership in law, ownership is characterised by a set of rights, for example, (property) rights in the use of resources by the firm and by different stakeholders in the firm. Ownership can then be broadened by anchoring ownership to an intra-firm assignment of property rights (analogous to the possession of residual rights) based on a sound ethical foundation. It is not dissimilar to membership of a "club" in the club theory approach to collective action, McNutt (2000). Consequently, the employees do not acquire governance outright, rather property rights short of ownership accrue to those employees, who as stakeholders adopt a code of ethics. This is the quintessence of good governance amongst employees.

2.3 Value set model of the firm

The Neoclassical model of the firm describes its objectives as profit maximising under the constraint of a production function. In fact, it considers the entrepreneur as indistinct from the firm itself. In a world where management and ownership are separated and often mutually exclusive, management is best defined as an employee. Although separated by financial criteria – exception arises when management are offered bonus shares in the company – management and ownership are more integrated within the stakeholder firm, wherein the objectives are maximised under the constraint of a value set.

Each competing firm in a market has its specific value set. And the market, often initiated by governments and reinforced by the legislature, can dictate a market value set, for example, minimum pollution standards, minimum wage payments or the length of the working week (35 hours). The stakeholder firm – the s-firm – does not necessarily lag the market in creating a value set; on the contrary, the s-firm would take the lead role in a market by creating a value set. This divergence between the firm and the market, manifested in a lead-lag relationship, may create an agency cost for the stakeholder firm and there is the risk that such agency costs could operate as a constraint on the profit function.

In a value set model of the firm, it is useful to think of management as a heterogeneous group of people with different if not divergent or goal incongruent objectives. Likewise, homogeneity cannot be taken for granted amongst all employees. In the classical model, satisfaction is measured in terms of utility maximisation. In the stakeholder firm, any divergence of views between management and workers has to be minimised. This can be achieved through an adaptation of Kantian ethics for the stakeholder firm with all employees displaying a conscious obedience to (ethical) rules.

3. Kantian ethics

In trying to reconcile Arrow's dilemma in defining the firm, the worker-stakeholders should be redefined as having (property) rights short of ownership, in the firm. The entrepreneurial skills of management and the workers within the firm are co-special assets; in other words, the skills, reminiscent of Becker's firm-specific human capital,

complement the asset value of the s-firm. And herein lies a moral dilemma for management in the deontological sense – management have a duty to workers.

3.1 Categorical imperative: well-defined property rights

Kant (1967) believed that the sole feature that gives an action moral worth is not the outcome that is achieved by the action, but the motive that is behind the action. Therefore, in Kant's view, moral actions are actions where reason leads, rather than follows, and actions where we must take other beings that act according to their own conception of the law, into account. Thus, the categorical imperative for management is to ensure that property rights are well defined within the firm. In other words, property rights are well defined when they become a universal law within the firm – it is less difficult to achieve a common denominator in a global village wherein the firm is more than likely to be a subsidiary of a larger trans-national corporation.

Freedom plays a central role in Kant's ethics because the possibility of moral judgement presupposes it. Without the assumption of freedom, reason cannot act. For example, management have the ability to make judgements and apply reason; it puts them outside that system of causally necessitated events. Management as human beings act as a means to other ends than to an end in itself. It is quite possible, that this desire for a "means to other ends" may have formed the breakdown of board-level corporate governance in the past few years as the desire for greed and personal financial gain over-rode existing checks and balances.

3.2 Purely rational beings

In one respect, Kant's attention to "purely rational beings" and their conscious obedience to (ethical) rules could support the traditional economic model's assumption of the concept of rational behaviour and rational man. If so, then a key area of Kant's moral philosophical teachings can be built into a value set economic model. The pursuit of profit may have become the dominant strategy in a game of ethical values during the past few years. Going forward, however, the pursuit by employees of a code of ethics within their s-firm may become the dominant strategy as their peers, in terms of adherence to a corporate social responsibility, rank competing firms.

Management are not wholly rational beings, so are liable to succumb to their non-rational impulses. Equally, even when we exercise our reason fully, we often cannot know which action is the best. And this is more acute for management. Therefore, an economic model of the firm should be built on a positive culture of ethics. It should be adaptable in any situation irrespective of its complicated or inflexible nature, partly by a system of self-reinforcement through management's careful selection and recruitment of like-minded, ethically congruent employees.

An example of inflexible rules can be seen, for example, in the US Sarbanes-Oxley Act, which imposed tougher penalties on directors along with restrictions on auditors providing non-audit services. Prescriptive legislation is one approach – ultimately, compliance with ethics and good governance will be driven less by the threat of legislation and government intervention and more by the stigma of being branded an unethical enterprise in a "name and shame" mentality since unethical behaviour would be in direct contravention of a new emerging "culture of ethics". This really forms the basis of Kant's ethical and moral beliefs.

3.3 Bounded rational

Kant believed that a rational being would conform to the dictates of reason. In the Kantian world humans are between the two worlds of animal consciousness and rational behaviour. Humans are neither wholly determined to act by natural impulse, nor are free of non-rational impulse. Hence management need robust rules of conduct within the firm – where these rules are lacking morals can slip and workers may not work to full capacity. Modern firms today need a principle that declares how all employees, management and workers alike, ought to act when they are given a level of freedom.

Management are often found in the situation of possessing reason, being able to act according to their conception of the rules. They have the ability to choose the ethical principle to guide the actions of the workers. They must exercise their will and their reason to act. Management as employees, rather than the worker-employees, possess more of this freedom to choose due to the more discretionary nature of management work. This is one possible explanation as to why the discrepancy in pay between management and worker-employees has widened over the last two decades – because management used their discretion to make decisions, which were not always ethical, that were ultimately in their own best interest rather than necessarily the interests of their corporations or worker-employees. For example, the characteristic share options that management are awarded cost them nothing to acquire yet they may have undertook high-risk strategies to increase the maximum value of these share options.

3.4 Reward for failure

Nevertheless, failure of these strategies again cost management no financial hardship other than their reputations. In a perverse way, a "reward for failure" culture can evolve and ultimately cost some organisations their future. In the late 1990s this gap between director and employee wealth widened considerably. The September 2002 edition of *Business Week* survey showed that in 2000, CEOs of quoted US companies made 531 times the amount earned by the average worker. This compared with just 42 times in 1980. There is no doubt that some of this unequal distribution of wealth was engineered through what could be called "corporate mis-governance". This would support a Kantian argument that wealth can be used for ill purposes and, therefore, cannot be intrinsically good.

Goodness cannot arise from acting on impulse or natural inclination, even if impulse coincides with duty. It can only arise from conceiving of one's actions in a certain way. What matters to morality is that the decision-maker thinks about their actions in the right manner. It is the possession of a rationally guided will that adds a moral dimension to one's acts. So it is the recognition and appreciation of duty itself that must drive the actions of all employees, management and workers.

3.5 Morally right

A good will is intrinsically good; its value is wholly self-contained and utterly independent of its external relations. Kant therefore, believes that actions are morally right by virtue of their motives, which must derive more from duty than from inclination. The clearest examples of morally right actions are precisely those in which an individual agent's determination to act in accordance with duty overcomes their

evident self-interest and obvious desire to do otherwise. Of course, human agents have subjective rather than rational impulses – desires and inclinations that may contradict the dictates of reason. Indeed, the principal-agent conflict of interest where managers attempt to reduce profits by increasing their level of remuneration has a Kantian ring to it.

4. A code of ethics, values and beliefs

Inextricably linked to the organisational culture within a stakeholder firm is the degree to which an ethical code supports the culture. A code of ethics can be thought of as a set of moral principles or guidelines, which govern behaviour and which enshrine a set of values and beliefs (McNutt, 2002, pp. 21-30). A code of ethics is, therefore, concerned with what is good and bad and right and wrong in the organisation's decision-making, and often does reflect senior management's attempts to mould the culture of the organisation. Therefore, if workers see that management are behaving in an unethical manner, perhaps by artificially inflating revenue figures by in appropriate revenue recognition policies, then workers ultimately end up following their lead. Before too long the entire organisation is producing below potential and X-inefficiency can creep in to the organisation.

Ethical codes can be considered within the context of an organisation's culture. In Brown's world, for example, ethics, through beliefs and values, forms the basis of his "basic assumptions", which in turn form the building blocks of organisational behaviour. Values and beliefs are part of the cognitive sub-structure of an organisational culture. Values are intimately connected with moral and ethical codes, and determine what people think ought to be done. For example, individuals and organisations that value honesty, integrity and openness, consider that they (and others) should act honestly, openly and with integrity because that is the right thing to do.

4.1 The value set as the code of ethics

A code of ethics, through beliefs and values, forms the building blocks of organisational behaviour with a stakeholder firm. Values and beliefs are part of the cognitive sub-structure of any organisational culture. Values are intimately connected with moral and ethical codes, and determine what people think ought to be done. The value set is composed of rights and duties. The distinction is reasonably straightforward. For the most part, rights and duties are the opposite ends of a given spectrum. If management as an employer have a duty to ensure reasonable standards of health and safety for workers, workers have a right to expect it. If it is believed or if it has become a norm that workers have a right to a minimum wage, then management as employers have a duty to pay it.

As a generalisation it would be fair to say that workers in the more developed economies are generally more aware of their rights than workers in the less developed and developing countries. That is to say that the practice of "sweat shops" and the employment of under age workers are more commonplace in countries where workers are unclear of their rights. It is for this reason that in certain European countries large retailers are beginning to adopt the ethical Fair Trade™ concept within their retailing

division. This supports the idea of practicing corporate responsibility through a robust code of ethics.

Within the s-firm, there are role-specific rights and duties. For example, all workers have a right to use the firm's canteen or parking spaces. A role-specific duty may also be a legal duty: for example, the sales manager who failed to promote the firms' goods could also be in breach of contract. Or a worker who shirks on the production line would be failing in a role-specific duty, but may not be acting illegally. While insofar as any role-specific right or duty is moral as opposed to legal, it derives its moral force from being a restricted instance of a general right or duty. The sales manager or worker, for example, could be demonstrating an absence of a firm-specific value set: in other words, the value set within a firm is akin to a universal morality. In the absence of a value set there is a role-specific failure of a general moral duty of fidelity and obligation within the stakeholder firm.

5. Hofstede and national culture

Do nations have cultures? There is a significant literature, which assumes that each nation has a distinctive and describable "culture". In an employee-attitude study conducted by Hofstede (1980), national cultures and their influence on corporate practices were examined in great detail. He believed that culture was "the software or collective programming of the mind". He had identified principles of characterisation to a set of senior management in a variety of countries. In this paper, we briefly examine each of three of these principles in the context of our search for a general moral duty of trust and obligation within the stakeholder firm.

5.1 Power distance (low vs high)

Power distance demonstrated how removed subordinates feel from superiors in a social meaning of the word "distance". In a high power culture, such as many Asian countries, inequality is accepted and supports the view that workers are less aware of their rights – yet this has not stopped Western corporations from relocating their manufacturing sites and call centres to these cheaper locations to provide them with a competitive advantage. Subordinates prefer management who take decisions and do not delegate responsibility to them and, therefore, there is more centralised control.

In a low power distance culture, such as many typical Anglo-Saxon countries, subordinates expect to be consulted and to share decision-making, more often in a decentralised structure – in this situation the rights and duties are more equally shared although the decentralised nature of operations meant that a discrepancy of wealth creation opened between management and workers. One could argue that former Asian colonies (Philippines, India, Singapore and Hong Kong) have high power distance. Hofstede's low power distance provides a vehicle for understanding why opportunities arise to derail corporate governance and codes of ethics in countries such as the US and Britain. The consultation process may give rise to bounded rationality where management cannot see that the group decision may be unethical or incorrect.

5.2 Individualism vs collectivism

High individualism implies that there is less influence of personal relationships but more loose ties where individuals are expected to look after themselves. This leads to

the desire to seek more challenging work and more freedom to act but with more focus on oneself rather than a tendency to work together for a common good. A strong individualism culture, as seen in the US, puts the emphasis on "getting ahead" whereas a collectivism culture emphasises "belonging to" and social cohesion and integration combined with strong loyalty.

Many of the East European countries joining the EU show a strong tendency towards a collectivist approach due to the Communist philosophy. Conversely, Anglo countries were highly individualistic in Hofstede's study, whereas Latin and Chinese cultures inclined to be collectivistic and authority conscious. It is this drive and competitive characteristic of Anglo-Saxon countries that may have encouraged rules to be broken and mistakes to be hidden from internal and external audits or SEC investigations.

5.3 Masculine vs feminine culture

Hofstede also drew on the differences between masculinity and femininity by signifying the harder vs softer dimensions of work related culture. In a masculine culture, performance counts, money matters and ambition are the driving force. In a feminine culture, quality of life matters, people and the environment are to be considered in terms of equality and solidarity.

A strong masculine culture such as Japan exhibits a desire for personal achievement and advancement due to a performance orientation culture of ambition, assertiveness and dominance. Here management and workers focus on being assertive, tough and focused on material success. Masculine cultures place great emphasis on competition amongst colleagues and high performance. This invariably encourages greed as seen from the boom-bust Japanese economy in 1990 where ethical boundaries where pushed to the limit.

5.4 The economic nature of contracts

Hofstede's work has been criticised. McSweeney (2002), for example, argues that the claims are excessive and unbalanced; excessive because they claim far more in terms of identifiable characteristics and consequences than is justified; unbalanced, because there is too great a desire to "prove" his *a priori* convictions rather than evaluate the adequacy of his "findings". The limited characterization of culture in Hofstede's work and its confinement within the territory of states is at the genesis of much of the criticism. We may think about national culture, we may believe in national culture, but is national culture how we think? In the global village, ownership of the business is associated with impersonal shareholders who do not necessarily take an active role in the operation of the company. This may be changing in the post-Enron era. Shareholders are now beginning to exercise a role by insisting on good corporate governance within the firm. Hofstede's study provides a useful benchmark. The key characteristic of greed exhibited during a boom largely stems from these national traits of self-interest (individualism) and personal achievement (masculinity). And the result of being a highly performance driven economy creates a short-termist culture across the firms that is seen through a variety of aspects including autonomous and decentralised organisational structures, budgeting, investment decision-making and incentive schemes.

5.5 Global ethics

Conscious of these changes the large global firms are reviewing their rules of conduct. But is a global code of ethics attainable? On a national level, a code of ethics will only succeed as a rule within the firms if it achieves efficient choice and efficient decisions in the Paretian sense by which we mean choices and decisions for which there are no better alternatives that will improve the position of one employee without harming that of another – a type of ethical goal congruence. Achieving the Paretian ethic at the national plant could be a minimum common denominator for a firm with global reach.

Good governance at the employee level has to ask whether the employees as rational individuals in a state of nature would freely have agreed to the contract or arrangement within the firm that obligates them to do X. For example, increased productivity from the workers (duty and obligation) has to be balanced by a guarantee (trust and obligation) from management that the plant will not move overseas. This is the condition of Pareto optimality (McNutt, 2002, pp. 74-8).

Therefore, a Pareto improvement would occur if the employees move from (say) a position of no code of ethics to a contracting position with a code of ethics. In such a move, contracting involves transfer (of skills and knowledge) and transaction, both of which have the potential to contribute positively to value-maximisation within the s-firm, McNutt (1994). A value set theory of the firm allocates responsibilities between all employees in such a way as to maximise joint effort.

The contracting or exchange objective is to arrive at a mutually satisfactory outcome, an equilibrium point. Each individual will have to move from an initial position to the final equilibrium point, incurring a trade-off cost. A free rider problem may well arise; if so, a partial solution emerges, a "holding" position with one party to the arrangement – traditionally, the management – policing the move to an efficient outcome. In such circumstances there is a wealth effect accruing to that party. However, a Pareto inferior allocation of resources will persist with wealth effects. This has to be avoided. Within the s-firm it can only be avoided through trust – trust amongst the parties to the arrangement, so that no one party in the kingdom of ends Kant (1967, p. 96) can "hold-up" the joint effort: in other words, each party to the arrangement, has "dignity".

6. Concluding comments

In the adaptation of a Kantian code of ethics for all employees two important sources of organisational culture have to be recognised – the national cultural identity of the country wherein the firm or company operates and whether or not a sense of duty and obligation permeates as a rule based code within the organisation in either an overt or covert manner. The sources of organisational culture can influence employee corporate governance in firms in various countries and societies. A successful code of ethics depends on the apportionment of obligation amongst, and acceptance by, all employees. Therefore, good governance at the employee level has been obtained when rational individuals in a state of nature would freely have agreed to the contract or arrangement within the s-firm that obligates them to do X.

Hofstede referred to culture as the "software" or "collective programming" of the mind and the programming of ethical values. Of course if the culture of a society fails to provide individuals with the ethical foundation for a rule based code of ethics then

core values within a firm or organisation may be hard to change, as these tend to be central to the stability of society. Obligation and duty within the s-firm may have to inform obligation and duty within society and not *vice versa*. Therefore, a value set theory of the firm allocates responsibilities between all employees in such a way as to maximise joint effort. There is ethical symmetry between management and workers: they "share the end of the action", Kant (1967). The s-firm teaches people morality. This is the quintessence of employee governance.

The idea has its origin in the liberal tradition, in that it emphasises that society and its institutions, including the firms and corporations, have no inherent or natural rights over the individual. In effect, they have only those rights that the individual considers at a Rawlsian original position. While it may be possible to introduce a Pareto improvement by improving the position of one of the contracting parties in the firm the greater challenge is to improve the position of both contracting parties. The reforming efforts across the world economies in the post-Enron era are already laying the foundations for good governance. As much emphasis should be placed on employee governance as on governance at board level – not only for the benefit of the s-firm, but above all, for the benefit of society. As the Roman jurists said, it is *certus an sed incertus quando* (it will certainly happen, but it is not certain when).

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Thomas Hobbes and the displacement of political philosophy

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Abstract

Purpose – This paper aims to demonstrate the pivotal role played by Thomas Hobbes in the displacement of political philosophy by economic science.

Design/methodology/approach – The focus of the paper is an analysis of Hobbes' most clear and accessible work, *The Leviathan*.

Findings – The paper shows that Hobbes was the first not only to enunciate comprehensively a mechanistic understanding of man as matter in motion but also, more importantly, to infer from this the logical conclusion that the only end for human kind is the preservation of the matter which the human race comprises. Economic science, being the science of material preservation, necessarily becomes, therefore, the true science of man and Hobbes the first political economist.

Originality/value – Hobbes' application of the methodology of mathematics to analysing human behaviour was not unique. What is original in his writings, and not clearly recognized in the literature on the history of economic thought, is the clear link made by Hobbes between this adaptation and its logical consequence in the science of material production (or economics) as the true science of man.

Keywords Philosophical concepts, Economics, Behaviour

Paper type Conceptual paper

Thomas Hobbes is well known in the literature on political philosophy and increasingly across a range of other disciplines for applying the principles of geometry and mechanics to understanding human behaviour. But an important aspect of his thought, which is largely overlooked, is the extent to which the new civil science he lays claim to introducing, actively demands an economic solution to the ancient political problem of justice and the just regime (Christensen, 1989, p. 689). This solution is made most evident in Chapter 24 of the *Leviathan*, where we find almost the entire foundations of economic science and indeed the essence of all that has followed in the scientific study of economics over the intervening centuries. Hobbes' political solution is effectively an economic solution, which, although favouring monarchy, nevertheless provides the foundations on which John Locke, Montesquieu, Adam Smith and The Federalist were to develop the commercial republic. In short, Hobbes economic solution demonstrates how free market exchange may function automatically within a monarchical political regime to ensure the peace and material preservation of all the members of the polity. This paper demonstrates that Hobbes' primary purpose in explicating a mechanistic understanding of man[1] is to demonstrate that such an understanding leads inexorably to an economic solution to the problem of polity. If man is nothing but matter in motion, then his only possible and knowable purpose is to conserve the matter of which he is comprised. Economics necessarily therefore becomes the science of man (Cropsey, 1960).

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This mechanistic interpretation of Hobbes' understanding of human nature is widely held, but not entirely uncontroversial. While it was the accepted view in Hobbes' own time and for many years thereafter, other interpretations have sometimes prevailed (see Greenleaf, 1972, for a comprehensive summary). The main alternative is that Hobbes was much more a part of the Christian natural law tradition than had previously been recognised and that his teachings were part of, rather than a rebellion against, that tradition. The most obvious objection to this view, is Hobbes' own claim to present an entirely new teaching (Hobbes, 1962, p. 19)[2] along with his frequent, scathing criticism of the Aristotilean and Scholastic teachings. The more interesting alternative is that Hobbes' mechanistic understanding was something of a rhetorical device to facilitate the acceptance of his political teachings by an *intelligentsia* already enamoured of the new sciences of Galileo and Newton (Strauss, 1936). More recently, and in a similar vein, Quentin Skinner has argued the case for Hobbes' recognition of the importance of rhetoric, that is, of presenting his teachings in a manner conducive to their understanding and adoption (Skinner, 1996). The thrust of the argument in this paper is to show that Hobbes' new science of morals and politics depends upon an economic solution to the traditional political problem of justice and the just regime. Understanding man as a machine was an integral component of Hobbes' entire argument. While admitting the possibility that this understanding may be something of a rhetorical device, this paper emphasises the importance of the mechanical understanding to Hobbes' economic solution. It is likewise necessary to demonstrate his reliance on the method of the new science to both gain acceptance for his new teachings and to repudiate those of his predecessors.

The theoretical grounds for what Hobbes called the artificial man, the commonwealth, an automatically functioning political regime, are evident in all his political writings, but are typically regarded as being most clear and accessible in the *Leviathan*, published in 1651 (Skinner, 1996, Chapter 8). This is particularly so in relation to the economic solution, which, as said, is specifically articulated in Chapter 24 of this work. The Leviathan of the title is Hobbes' new commonwealth, which he called an artificial man because it was a political regime, which functioned automatically, or as would now be said, with minimal government intervention. Hobbes claimed in the introductory pages that he was about to elaborate an entirely new political teaching. In doing so, he was aware that he must explain why the previous tradition of political philosophy was insufficient or wrong. The full title and epigraph to the *Leviathan* foreshadow his intentions in this respect. According to Biblical tradition humankind had been distinguished by God from the other species through the rational faculties and were for this reason, the peak of creation. The Socratic philosophers arrived at a comparable understanding on an entirely different basis, namely unaided human reason (Plato, 1968, p. 170). The epigraph to the *Leviathan* suggests Hobbes intends to deflate man's pride in being considered divine like and this is indeed what he must do if he is to be convincing in reducing man to a mechanical automaton. The Latin epigraph is from *Job*: 41, 33, which King James' bible renders:

> Upon earth there is not his like (and continues) who is made without fear:
>
> 34. He beholdeth all high things: he is a king over all the children of pride.

The implicit suggestion is that fear (which is natural to man) may be alleviated or removed if pride is deflated. The full title, i.e. *Leviathan: or the Matter, Form and Power of a Commonwealth Ecclesiastical and Civil*, reinforced Hobbes' project. He is silent on the telic or end cause as understood by Aristotle and the Schoolmen. Nevertheless he equated a commonwealth with an artificial man intended for the protection and defence of the natural man, citing civil war as the death of the commonwealth and concord as its health. The tacit assumption, therefore, which he subsequently made explicit, is that all men agree that peace is good and so also the way to it. The end naturally intended for a commonwealth is simply to secure peace; the reason, it will become clear, is that peace is the initial criterion necessary for ensuring material preservation, there being no higher end for mankind. Accordingly, if peace or concord is the health of the commonwealth, the source or sources of discord must be removed or diverted into peaceful ends.

Hobbes attack on the previous tradition of Western thought was systematic and consistent and while this is widely recognised, particularly in the earlier literature, the fundamental basis of this attack and the implications of that basis are not so well understood. Hobbes perceived the superiority of his own analysis to be entirely methodological. That is, in applying the principles of mechanics and geometry to human affairs he believed his findings could not help but be superior to that of his predecessors, who lacked a precise mathematical approach (Sorrell, 1996, p. 47; Jesseph, 1996, p. 86). This suggests Hobbes' new political regime was invented, meaning he relied upon the principles of geometry to create a wholly new political science. Nevertheless, although largely invented, Hobbes claimed his new regime was also imitative of nature and in particular, the aspect Hobbes identified as most excellent in nature, which was man's rationality. While this implies a link to the previous tradition, Hobbes in fact made a remarkable break with all previous thought in his treatment of the rational faculties. The pre-Hobbesian view was that reason and speech are both natural. Hobbes allowed that God was "the first author of speech ..." (Hobbes, 1962, Chapter 4, p. 33), but then declared that all the language gained and augmented by Adam and his posterity was effaced at the Tower of Babel. Most importantly, he claimed the diversity of languages in existence by his own time, had been taught by "need, the mother of all inventions". Hobbes' own understanding separates the rational faculties, suggesting speech, rather than being natural is acquired, or, more specifically, invented. And while reason retains its link to nature, his understanding of man and nature was intended to replace that of the Schools and Aristotle.

To further elaborate this point, Hobbes distinguishes between words "which are wise men's counters", and words which are "the money of fools, that value them by the authority of an Aristotle, a Cicero, or a Thomas" (Hobbes, 1962, p. 37). The distinction he intended was between mathematical reasoning, which yields real understanding and the prior tradition, as elaborated by its most famous exponents. Aristotle (and also the Schools) had enumerated four types of explanation for the sake of understanding. Aristotle's four criteria were the material, the formal, the efficient or generative causes, and the final or telic cause. All belonged together in order to explain the cause of a thing (Jesseph, 1996, p. 86). Hobbes dispensed with the formal and final causes, retaining only the material and efficient causes, "and even these are explicated anew"

(Zark, 1996, p. 70). He effectively made the material cause the efficient cause, but as Zark notes, "causation in general can result only from … motion" (Zark, 1996). The manner in which Hobbes came to dispense with all but the material cause is to be found in Chapter 32 of the *Leviathan*, where he outlined three ways of knowing; divine revelation, experience and definitions. By the latter he meant geometry. His intention was to exclude the first two, leaving geometry as the only possible means by which man could reliably understand all manner of things. He began by claiming the word of God to be beyond human understanding, meaning the scriptures must effectively be swallowed whole if they are to be accepted (Hobbes, 1962, pp. 271-2). Hobbes wished to convey that if there are any ends for man intended by God, these are unknowable. His real intention, however, was to continue undermining the whole edifice of Sholastic theological teachings and its roots in Aristotelian philosophy, describing these as convoluted attempts to better interpret the word of God which had been worse than useless (Hobbes, 1962, pp. 273-4).

Having dispensed with the first way of knowing, Hobbes turned to the senses. Knowing through the senses or experience, he found defective, sense being nothing more than "seeming or fancy", or, in contemporary terms, subjective and relative to the perceiver. This is evident when Hobbes first speaks of sense as the origins of all the thoughts of men; every thought being "a representation or appearance, of some quality, or other accident of a body without us, which is commonly called an object" (Hobbes, 1962, p. 21). Hobbes did not adhere to what is common. *The Oxford English Dictionary* informs us that "body" took on the meaning of a geometrical solid in 1570 as a result of prevailing concern with matter as matter[3]. Hobbes reflected this concern when he observed that "(a)ll … qualities, called sensible, are in the object, that causes them, but so many several motions of the matter, by which it (the object) presses our organs diversely" (Hobbes, 1962, p. 21).

The sensible qualities are simply motions of the matter of the external body or object and sense is nothing other than original fancy caused by the pressure of the motion of external things via "the organ proper to each sense, either immediately, as in the taste and touch; or mediately" of the nerves and other organs of the body, from which it proceeds inwardly to the brain where it elicits a counter motion or pressure which results in the perception of the external object. The image is relative to the perceiver, who nevertheless believes it to be in the external body itself: and "this seeming, or fancy, is that which men call sense" (Hobbes, 1962).

In demonstrating knowledge based in the senses, or experience, to be subjective and unreliable, Hobbes accomplished two goals. As all previous political theory was based on sense and experience he was able to claim that this entire body of thought must of necessity be incorrect. In addition, by showing sense perception to be a mere mechanical process of motion and counter motion, Hobbes demonstrated his contention that man is to be understood as matter in motion and, therefore, as responding mechanically to the laws of nature in a manner comparable to any other physical object. Mankind was, therefore, best understood by reference to the new sciences of mechanics and physics, which all begin from definitions.

Hobbes' faith in definitions as a means to understanding is famously attributed to his discovery of Euclid and natural science (Gaskin, 1994, p. 235). Euclid's reasoning described a method which Hobbes believed provided the foundation for all true

reasoning, an abstract scientific method, through which the world becomes intelligible by a means of reasoning which is entirely independent of sense perception. This method, adopted by Hobbes, is described by him as the compositive-resolutive method and its mathematical counterpart is the synthetic-analytic[4] (Hobbes, 1994, p. 194)[5]. This is the analytical method of mathematics, commonly used in setting up algebraic equations where there is some unknown which is taken as "the given" – the thing agreed to be sought. Then, by following the necessary consecutive steps the unknown or given is made known in terms previously agreed upon. The method of mathematics never steps beyond the definitions agreed upon and the definitions, as agreements or conventions, independent of sense perception, are simply inventions of the human mind.

Hobbes not only wanted to establish this method as the only true way of knowing, he also wished to establish this method of reasoning as natural to man by way of its being prior to the invention of speech. In further elaborating his definition of sense, Hobbes identified successions of thought in men. Because speech for Hobbes was invented, these successions of thoughts, which he identified as natural must represent a type of mental discourse, or discourse without words. More specifically, Hobbes distinguished two types of thought sequences, the first, unguided and the second guided by some passion or desire and in consequence the stronger. The significance of the latter is that the end of the sequence results in the satisfaction of the desire. Men, therefore, came to recognise successive sequences of thought as following one upon the other and leading to some consequence or having some result they wished to obtain. This describes a primitive type of causal reasoning, which allowed Hobbes to identify geometric reasoning as natural to man and thereby providing a link to nature in the method he himself adopted to understand man and nature. We have observed that prior to Hobbes, both reason and speech were regarded as natural; the rational faculties which separated man from the beasts and, in addition, provided for men to live in cities. In separating reason and speech, declaring the latter to be acquired and the former natural and preceding speech, Hobbes ensured he did not break entirely from nature as the universal standard. He preserved a basis in nature for the compositive-resolutive method of mathematical reasoning, which in the 17th century provided a necessary validation for his teaching. But he abandoned the Socratic link of intellection or *noesis* with the transcendental ideas.

From the one regulated thought, which ends in the power of satisfying the desire, Hobbes was then able to derive all causal reasoning. The parallel to geometry and all mathematical reckoning is clear. The image left from the counter-motion being identified with the power to satisfy a particular desire within the living body, permits all other images similarly derived to be traced to the original motion and desire which is most powerful in all creatures, most of the time; and which originates from matter itself. Motion is common to all matter, but in animate matter is called life; hence, the desire for self-preservation, Hobbes postulated, is the axiom from which all-human understanding necessarily begins. By so identifying the origin of motion, the compositive-resolutive method allowed for the derivation of all possible effects that can flow or follow from it; and did so by reason alone.

Although identifying geometric reasoning as natural to man, Hobbes recognised that this primitive cause-effect reasoning lacked the exactitude required of a true

geometric science. That is, geometry and all the mathematical sciences owe their exactitude and infallibility to the starting point of their reasoning in precise definitions. Definitions in turn owe their truth or validity only to universal agreement to use them according to the meanings signified by the words employed. It follows that definitions owe their validity to the faculty of speech. The use of words effectively enables men to comprehend universal rules, for instance, that relating to the angles of a triangle and then use these universal rules to solve specific problems (Hobbes, 1962, p. 35).

Scientific reasoning, as understood by Hobbes, proceeds, therefore, by a method of reasoning which makes use of words alone and moreover, follows from the manner of generation of a thing to the properties. The properties are the consequences or effects of the generative causes; for instance, geometry proceeds by beginning with definitions, which, as said, are independent of sense perception. Hobbes believed we can do the same with man; that is; if we know the generative cause of the motion of man, we can reason by the compositive-resolutive method as to the properties required by the generative cause, which are the conditions necessary and sufficient to preserve the motion of man.

It is in this manner that Hobbes attempted to derive the character of political and civil life from nature, especially human nature. He did so by developing a theory of the state of nature, from which he was able to derive a set of precepts or rules to govern civil society in accordance with human nature. Hobbes had knowledge of primitive tribes and more importantly, of the state men degenerate into in civil war and he had assumed man to be matter in motion, motivated by the strong desire to preserve that motion. Moreover, he had severed the social faculty of speech from reason, concluding, therefore, that society could not be the natural condition of man. And if man is nothing but matter in motion, differing only in degree, or quantitatively rather than qualitatively, from other animate and inanimate matter, then the differences observable between men in society also cannot be natural. The state of nature must, therefore, be an asocial condition characterised by a radical equality, which Hobbes found most manifest in the equal ability men have to kill each other. The desire to kill others arises because men have an equal desire for their own preservation and an equal ability to pursue that desire and when it cannot readily be satisfied, enmity arises. In consequence, man's origins as Hobbes understood them must differ substantively from those indicated by Biblical and Aristotelian teaching. This is the real significance of Hobbes' much quoted state of nature as a state of penury and scarcity and consequent war between all men and "...worst of all continual fear and danger of violent death; and the life of man, solitary, poor, nasty, brutish, and short" (Hobbes, 1962, p. 100). And as is also well known, this savage and brutal condition of man's original state where the most predominant passion is fear of violent death, gives every man a natural right to self-preservation (Hobbes, 1962, p. 103).

Hobbes' primary evidence for the state of nature was the manner of life he perceived amongst men who degenerated into civil war having formerly lived under peaceful government. He also believed that the state of nature was never generally in existence over the entire world; and his examples from the savage peoples in the Americas were from men in society possessing both the rational faculties. In other words, Hobbes' state of nature is purely hypothetical. While, in a sense, this is widely understood, the real significance of man's origins as an hypothesis is not explicitly recognised. That is,

we find in Hobbes description of man's origins little that has not already been indicated by the assumptions he made in order to facilitate an understanding of these origins and much to support the assumptions. The method he adopts and applies to human behaviour becomes in that application tautological. Hobbes made a number of assumptions from which he developed a hypothetical state of nature, which then validated his initial assumptions. The radical selfishness of man in the state of nature was merely due to life being motion immanent in the matter or body and so subject to the law of conservation and its complement, inertia. And a necessary consequence of this assumption, validated by the hypothetical state of nature, is that material preservation is the only valid goal or end for man and society. In addition, he supplemented this initial contention based on a mechanistic understanding of nature and human nature with a new doctrine of natural right, which made right (the right to self-preservation) primary and duty or obligation secondary in society and of no consequence out of society. Hobbes' new understanding of natural right is significant for this paper only in indicating the strength of his entire project, and its break with the previous tradition. Hobbes' role in introducing a changed understanding of natural law is explored more fully elsewhere (Strauss, 1936, 1953).

One of the most popular aspects of the current literature on Hobbes is the application of game theoretic analysis to understanding the transition primitive man makes from the state of nature to society, which is regarded as a classic prisoner's dilemma situation (Slomp, 2000, p. 124). But for Hobbes, how man leaves a purely hypothetical natural state is necessarily of little consequence. The importance of man entering society was that the power of satisfying desire through reason had allowed primitive man to calculate that by banding together with others he could best ensure his own survival. The inference from man leaving the state of nature in order for each individual to preserve his own life is simply that by being a form of motion each body of matter is subject to the same laws of physics as govern all matter and motion and hence, "... it is a precept, or general rule of reason, that every man, ought to endeavour peace, as far as he has hope of obtaining it" (Hobbes, 1962, pp. 103-4).

This precept, or dictate of reason, is the first of 19 theorems subsequently elaborated by Hobbes "concerning what conduceth to the conservation and defence of" a commonwealth. These 19 theorems constitute a political geometry, and being derived with a view to man's conservation, are sanctioned by the same physical laws as those relating to inertia. In other words, the conservation of the matter of which man is made is the only goal or end of the commonwealth, and as indicated by the first precept, the commonwealth is therefore intended to ensure peace. The 19 theorems, being dictates of reason, must conform to reason, as Hobbes understood it, i.e. to the natural train of thoughts regulated by some desire and design. Hobbes explained that the ways to peace are dictates of reason which men used to call laws of nature "... but improperly: for they are but conclusions, or theorems concerning what conduceth to the conservation and defence of themselves; whereas law, properly, is the word of him, that by right has command over others" (Hobbes, 1962, p. 124). Hobbes' articles of peace are to be understood as laws of nature only in the sense that their derivation is consistent with the method of reasoning attributed to man as natural.

The parallel to physics is that in identifying the underlining forces or laws of matter and formulating the findings as quantitative relations and testing by controlled

experiment, others, such as engineers, can develop machines (like watches, steam engines and so on) utilising these laws. In a similar manner teachers of princes – or more generally, advisers to politicians – can instruct them as Hobbes intended concerning the true laws of nature governing political societies. As the material which the political ruler works upon is living matter in the form of human beings, Hobbes' intention in formulating his 19 theorems is to ensure peaceful means whereby the motion of man can be preserved according to the law of conservation. But peace in itself cannot guarantee the motion of the matter. The necessary condition for preservation is to ensure a peaceful supply of what is needed for nutrition. Hobbes' 19 theorems show how free market exchange working within the appropriate legal framework, which he believed was best provided by a supreme sovereign, work to ensure the peaceful preservation of the matter of a commonwealth.

The fundamental precept is that all ought to endeavor peace, but only if the desire is common to all men can it be effective. The second precept follows the first, "that a man be willing, when others are so too ... as for peace, ... to lay down this right to all things; and be contented with so much liberty against other men, as he would allow other men against himself" (Hobbes, 1962, p. 104). This means laying down the right to hinder others in their quest for self-preservation – or in practical terms, men turn over their right to force to a sovereign power. Transference or renunciation of right is made solely to achieve the first or fundamental precept, meaning there is no higher goal of civil society than peace, and peace is desired only to achieve the end of material preservation. According to Hobbes peace within civil society is best ensured if the common power set over the rivalling parts is an all-powerful monarchy, but he accepts the possibility of some alternative regime achieving this end (Malcolm, 1996, pp. 26-7). The great Leviathan of the title indicates Hobbes' belief in the need for a strong and unassailable civil government. His preference for monarchy relates entirely to his belief in that, as the strongest regime, it best conduces to man's material preservation, not only by subduing opposition, but also by strongly enforcing the rules of free market exchange.

The third precept, which is most significant for economic science, is the obligation to keep convenants made, the keeping of which is called just. The pre-Hobbesian view of justice was of a self-subsisting entity along with the idea of the good which could only be grasped, if at all, with the part of the soul fit to grasp "the nature itself of each thing" (Plato, 1968, p. 170). Prior to Hobbes, the traditional problem of political philosophy was the quest for the just regime. The development of economic science and its subsequent displacement of political philosophy proceeds from this precise point where Hobbes reduces justice to keeping contracts voluntarily entered into. Hobbes' discussion of the nature of contracts is made in the context of the transference of natural right to a civil authority (Hobbes, 1962, Chapter 14). But the examples he uses are largely related to contracts in exchange. The implication is that although the initial contractual obligation men make is to transfer their natural right to defend themselves to a sovereign power, in practice, we can know little of that first contract. Of immediate and practical importance are the contractual obligations of exchange which ensure men's preservation. Hobbes thus moves very quickly from the seemingly most significant contract, which takes man away from his origins, to the contracts relating to voluntary exchange, which are in reality of most importance for the

continued preservation of the species. In other words, as a result of an initial voluntary contractual transference of natural right, we have an ongoing coercive power that rules over all men to ensure their joint preservation. The most important function of that coercive power appears to be ensuring that contracts voluntarily entered into are legally enforceable; that is, to provide a legal framework within which voluntary exchange can peacefully function to ensure the joint preservation of men in civil society. In consequence justice and injustice cannot exist outside civil society, as being concerned only with keeping contracts, justice can relate only to positive law. Hence, there can be no supra-human support for justice and no such thing as an abstract sense of justice accessible to reason and serving as a model by which positive law can be judged.

Justice as nothing more than obedience to civil law in keeping contracts is a powerful reduction from all previous notions of justice and leads inexorably to economics as the science of man. In Chapter 9 of the *Leviathan*, Hobbes presented the then new sciences in tabular format. While he provided a more comprehensive discussion of the sciences in *De Corpore* (Chapter 6), it is the table in the *Leviathan* which is most relevant for economics. Here, Hobbes clearly states that the science which relates specifically to man is the science of the just and unjust, or contracting, which, in practical terms, is the science of free market exchange, or economic science. In Hobbes' tabular format, the science of contracting is a subcategory of those sciences, which are consequences of speech. Justice would, therefore, be wholly conventional if speech were not derivative from reason as natural. Accordingly, and as we have observed, speech was classified by Hobbes as a consequence from the qualities of men in special, which in turn is part of physics and so ultimately, part of natural philosophy. Justice is effectively confined to the enforcement of contracts whereby men acquire property and can, therefore, only exist in the context of a society where contracts are enforceable. The laws, Hobbes claimed, are powerless "without a sword in the hands of a man, or men, to cause those laws to be put into execution" (Hobbes, 1962, p. 161). The liberty of the subjects then consists in those things the sovereign permits and Hobbes emphasised here, "the liberty to buy, to sell and otherwise contract with one another, to choose their own abode, their own debt, their own way of life". In other words, a sovereign power best guarantees market freedom: and Hobbes noted the West had long been deceived in equating democracy with liberty (Hobbes, 1962, p. 163).

Hobbes referred to previous philosophers, by whom he primarily meant Aristotle, who divided justice into commutative and distributive. The former he said referred to proportion arithmetic and the latter to proportion geometric. He also initially described justice, as the constant will of giving to every man what is his own (Hobbes, 1962, p. 98). In doing so he acknowledged the notion of a just or fair price, which had preoccupied all previous philosophers who had occasion to address the role of economic exchange in political affairs. The notion of equating exchange value with fair value continued to preoccupy the political economists such as Adam Smith and even Alfred Marshall, but it was initially addressed most explicitly by Hobbes and it is perhaps not until Karl Marx attempted to tackle Aristotle on this subject (Marx, 1954, pp. 65-6), that there was such a clear recognition amongst the new practitioners of

political economy that they must address this notion in order that their own analysis be accepted.

The question of justice in exchange had most notably been introduced by Aristotle in Chapter 5 of the *Nicomachean Ethics*. Aristotle asked a similar question to that which was confronted by Hobbes and more extensively in later years by Adam Smith (Smith, 2003, p. 42) and then Karl Marx (Marx, 1954, pp. 64-5). In other words, how can quantitatively different things, such as a house, or a pair of shoes be exchanged in a way that ensures if not equality, then justice, in the transaction? According to Aristotle, justice in exchange was achieved through the exchange of goods of equal value (Aristotle, 1990, p. 86). Aristotle recognised, however, the difficulty in ensuring equality in the exchange of qualitatively different things. He acknowledged that exact equality in exchange was not possible, but money was nevertheless able to facilitate fair exchange, whereby a rough equality could be achieved which was sufficient to satisfy needs for practical purposes (Aristotle, 1990, p. 87). But the concept of fairness or justice in exchange was nevertheless primary in Aristotle's analysis and in what followed in the Scholastic teaching which continued until the seventeenth century English Enlightenment.

In addressing Aristotle's distinction between commutative and distributive justice Hobbes remarked that Aristotle and the Schools found "commutative justice in the equality of value of things contracted for; and distributive in the distribution of equal benefit to men of equal merit. As if it were injustice to sell dearer than we buy; or to give more to a man than he merits" (Hobbes, 1962, p. 117). Hobbes, to the contrary, maintained that the value of all things contracted for is measured by the appetite of the contractors: "... and therefore the just value is that which they be contented to give" (Hobbes, 1962). It is the interaction of buyers and sellers and the relative strengths of demand and supply, which determines price. The old distinction, Hobbes said, was not relevant because "commutative justice is the justice of a contraction" (Hobbes, 1962), meaning that commutative justice is found in performing contracts according to their legal specifications. Distributive justice respects merit and belongs to the 11th law of nature, equity. This depends on trust between men, without which disputes could not be determined peacefully. Likewise, commutative justice or market-exchange could only achieve equity if, somehow, trust is engendered. Adam Smith addressed this issue. Hobbes was content that exchange be peaceful and controversies be resolved by an arbitrator. This is the subject of the last three laws of nature.

While peace is the necessary precondition for material preservation, the sufficient condition is the nutrition of the commonwealth. In other words, the nutrition of the commonwealth is the real means by which its members are preserved and the peaceful conditions for free market exchange provides both the necessary and sufficient conditions for this preservation. The nutrition of the commonwealth, Hobbes claimed to consist in the plenty of matter from the land and sea, which God either gave freely to man, or exchanged in return for labour and industry. The latter, it becomes clear, is more important. In this respect Hobbes anticipated Marx in stressing not only the need for preparation of the materials of nature in order that they are made suitable for public use (Hobbes, 1962, p. 185), but also the importance of distribution in order that all may benefit from the productive resources available. And he made clear that distribution is best achieved via market contracts or free market exchange:

> . . . it is not enough to the sustentation of a commonwealth that every man have a property in a portion of land, or in some few commodities, or a natural property in some useful art . . . it is necessary that men distribute that which they can spare, and transfer their property therein, mutually one to another, by exchange and mutual contract (Hobbes, 1962, p. 188).

The plenty of the matter depends, therefore, on the production and distribution of what Hobbes called commodities. In the writings on political economy, the word commodities came to be associated with goods produced specifically for exchange. Adam Smith, for instance, distinguished value in exchange from value more generally and indicated that his concern was with the former (Smith, 2003, p. 41). Marx defined commodities as goods produced specifically for exchange and identified these with the capitalist era (Marx, 1954, p. 43). But the initial identification of this meaning of the word commodities and the exchange of commodities as necessary to secure material preservation was made by Hobbes. In addition, Hobbes was also the first to refer to labour (not the labourer) as a commodity available for exchange, when he remarked that labour can be sold for gold or silver money, enabling the labourer to mutually contract with others for nourishment (McPherson, 1983).

Like Aristotle, Hobbes identified currency or money as the means by which exchange is facilitated, but went much further than Aristotle when he compared the circulation of goods via the money medium to the circulation of blood in the body. Hobbes described money as the ". . . sanguification of the commonwealth: for natural blood is in like manner made of the fruits of the earth; and circulating, nourisheth by the way every member of the body of man" (Hobbes, 1962, pp. 189-90). Hobbes had already called the circulation of the blood an involuntary motion, implying something involuntary or automatic in the exchange, which will take place in his political order. Again, this point is developed by Adam Smith who identifies a "certain propensity in human nature . . . to truck, barter, and exchange one thing for another" (Smith, 2003, p. 22). Gold or silver money is the sanguification of the commonwealth because it facilitates exchange, which is the real source of nourishment.

Hobbes also identified private property as a necessary precondition for a market economy. In consequence, laws relating to private property rights must be enacted and enforced. Private property has come to be associated with democratic political regimes, but it is clear that Hobbes associated a strong political regime, such as monarchy, with the power to provide an appropriate legal framework for a commercial economy based necessarily on private property rights. Thus, the original sovereign was responsible for the initial distribution of property, according to what he alone perceived as conducive to both equity and the public benefit. Hobbes had recourse to the example of the Israelites, whose land was distributed at ". . . the discretion of Eleazar the Priest, and Joshua their General" (Hobbes, 1962, p. 186). He noted in particular, that the distribution of land was in accordance with there being 12 tribes, meaning the 13th tribe of Levi received no land, but a "tenth part of the whole fruits; which division was therefore arbitrary" (Hobbes, 1962). Equity and the public good are, therefore, not to be associated with equality in either the initial distribution of land or any subsequent outcome. Instead Hobbes claimed that inequality in commercial society can be a means by which the causes of quarrel he found natural to man could be adequately addressed by the peaceful acquisition of earthly riches.

While Hobbes claimed to find a radical equality between men in the state of nature, he was aware that men in society differ in a number of important aspects; the most significant being the differences which continued to lead to enmity within society, and which, at their worst, led men into civil war. Hobbes identified three principal causes of quarrel; diffidence, competition and glory. The diffident were to be preferred, as they sought only to defend themselves against those who would take by force their cattle and grain, wives, children and slaves. These were the competitive, who if not constrained, would seek to increase their own plenty at the expense of others in order to satisfy their competitive natures. Worse still were the glory seekers, especially when motivated by religious beliefs, as the glory they sought being based upon rewards in the life to come, made them most difficult to restrain through punishments in this life. Hobbes' economic solution could mitigate the causes of quarrel between men by directing them to peaceful and socially beneficial ends. Hobbes effectively adapted the Tenth Commandment to better suit his new recommendations for polity, defining covetousness as a simple desire for riches and claiming it was to be praised or blamed in accordance with the means by which the wealth was sought. Only non-peaceful means of acquisition were incompatible with civil order. Hobbes' emphasis was on riches and his solution to enmity and the state of war involved the institution of a commercial society which extolled wealth and thereby turned the passions which previously caused quarrel to peaceful ends. Effectively he considered it not only desirable but also possible to direct the causes of quarrel into outlets beneficial for all.

We see here a precursor to Adam Smith's invisible hand, whereby the pursuit of private interest can result in the public benefit. For Hobbes, the proper direction of private interest promoted the goal of joint preservation. As indicated, he recognised the possibility of reinterpreting the Tenth Commandment in such a way that both the competitive and the glory seekers, rather than harming their fellow citizens by their covetousness, could actually increase the well being of all through market exchange. The diffident would be content if they believed their share to be a fair share, i.e. appropriate to what they have contributed and Hobbes said "... there is not ordinarily a greater sign of the equal distribution of anything than that every man is contented with his share" (Hobbes, 1962, p. 98). The diffident, in other words, would be content if the contracts they entered into were kept, and the prices they paid in exchange were determined in accordance with what would now be called market forces. If competition and the search for glory could be addressed through the peaceful accumulation of wealth, then, potentially it is not only the competitive and glory seekers who benefit by prosperity, but also the diffident, so long as Hobbes could ensure that free market exchange could take place in such a way that each continues to be content that his share is a fair share.

Initially, this is possible through what Aristotle recognised as the rough equality achieved in exchange provided by a monetary system combined with a strong legal structure. Hobbes believed however, that in times to come, the end of exact equality in exchange could be achieved if one commodity could be found which was invariable in its own value and could, therefore, provide a standard against which all other commodities can be evaluated and made commeasurable. The precious metals, especially gold, could achieve this purpose, being a "commodious measure of the value

of all things between nations, while money serves only as a sufficient measure" (Hobbes, 1962, p. 189). Because the value of money is easily enhanced or debased it cannot provide a precise measure on which to base a science of economics. Silver, and more especially gold, provide the precision of measurement, which enables political economy, or what becomes economic science, to establish itself as an exact science. This is "because gold and silver have their value from the matter itself (and so) they have ... this property, that the value of them cannot be altered by the power of ... commonwealths" (Hobbes, 1962).

Adam Smith further developed this notion of exact equality in exchange. Smith identified a homogenous quantity of labour value as providing the original and real price by which all other things could be measured, labour "never varying in its own value, is alone the ultimate and real standard by which the value of all commodities can at all times and places be measured and compared" (Smith, 2003, p. 47). Smith's arithmetic treatment of labour which permitted a homogeneous quantity of labour to be a constant measure of the value of all things was described by him in terms of labour-cost, which was the sacrifice by the labourer of a constant "portion of his ease, liberty and happiness" (Smith, 2003, p. 47). As such, labour value was an abstraction, which Smith made "plain and palpable" by its being given expression through money price in terms of the precious metals, especially gold. For Smith, the almost perfect inelasticity of the supply of gold meant its real value remained relatively constant over long periods of time. He was thus able to establish real price as the abstract mathematical notion of labour value, which was then given expression through a specific quantity of pure gold or silver. Smith's mathematical analysis of equality in exchange is considerably more complex than that elaborated by Hobbes, but it is nevertheless Hobbes who first recognised the need for an exact measurement in exchange for a science of economics to be possible. A common measure is also necessary for international trade and this demonstrates the widespread applicability of Hobbes' solution. If the laws of nature can be applied to men everywhere, they must be effective universally and are, therefore, intended for all countries. Hobbes, therefore, spoke of empires, which are for the expansion of trade – as opposed to military empires. These empires would not be forcefully acquired, but peacefully gained by way of exchange.

The political problem, the quest for justice was consequently solved by Hobbes not merely on a national level, but in universal terms. This is consistent with the application of the laws of physics to human society; such laws being universally applicable must be relevant for all men in all nations. Hobbes adaptation of the method of mathematics to human society was not unique. It is the clear link between this adaptation and the science of material production as the true science of man, or the new metaphysics, which is Hobbes least recognised, but arguably most important contribution to the history of political and economic thought. In particular, Hobbes paves the way for the displacement of the former by the latter by presenting a new science of morals and politics which, although contentious, has nevertheless proven successful in replacing the previous tradition of political and religious thought.

Notes

1. This paper follows Quentin Skinner (Skinner, 1996), in frequently using the word man to refer to humankind, and the male pronoun without the usual contemporary qualification (i.e. he/she). This is a reflection of Hobbes' world and of his writing, which current conventions have a tendency to obscure.
2. All references to the *Leviathan* are to the edition edited by Michael Oakeshott, with an introduction by Richard S. Peters, New York, Collier Books, 1962. Spelling and emphases have in some instances been modified for compatibility with contemporary usage.
3. The linguistic evidence would seem to repudiate the alternative view posited by Sacksteader (1979), who claims the materialist understanding of the word body to have been subsequent to Hobbes.
4. This is Hobbes own description of the method he adopts. It is typically recognised as such in the literature, although there are now some variations in the description. For example, Jesseph (1996, pp. 92-6) describes the synthetic-analytic method as followed by Hobbes, but suggests the compositive-resolutive is prior to Hobbes and not necessarily associated with him. These terms are perhaps now a little outdated. The important point is that Hobbes follows the method of geometry and mathematics, and this is essentially what both the compositive-resolutive and synthetic-analytic methods intend.
5. References to Hobbes' *De corpore*, are to the chapters from this work appended to J.C.A. Gaskin's edition of *The Elements of the Law*.

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Social responsibility: the most important, and neglected, problem of all?

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Abstract

Purpose – To draw attention to an important but neglected topic, and provide an analysis that will help others to go further into key elements of the theme of social responsibility.

Design/methodology/approach – A review of themes previously encountered in a diverse literature.

Findings – It is argued that many powerful forces within capitalist-consumer society militate against social responsibility. In view of looming global justice and sustainability problems the lack of social responsibility points to gloomy prospects for humankind. Yet it is argued that the solution is theoretically simple and three essential themes for the discussion of positive action are considered.

Practical implications – A number of important implications for education and social action are discussed.

Originality/value – The topic seems to have been almost totally overlooked previously, although many works are tangentially related.

Keywords Social economics, Social change, Attitudes, Responsibilities, Social interaction

Paper type General review

We are now plunging at an accelerating rate into a range of alarming global problems, especially the destruction of ecosystems, the increasing gap between rich and poor, resource depletion, armed conflict, the break down of social cohesion and a falling quality of life. Above all the taken for granted and almost never questioned supreme goal of consumer-capitalist society is grossly unsustainable. That goal is to raise "living standards", production and consumption and the GDP constantly and without any notion of a limit or a point at which we will be rich enough.

There are good reasons for thinking that we cannot now solve these problems and that western civilization will quickly decline into a new dark age. Books are being written on the firm belief that chaotic breakdown and the die-off of billions of people is likely and some believe inevitable. Unlike previous societies ours is extremely vulnerable and fragile because of its complete dependence on vast quantities of energy and on its house-of-cards financial system. Either of these factors could trigger sudden collapse.

The following discussion is a personal reflection speculating on why humans have allowed themselves to get into this situation and why they fail to get themselves out of it. It is not focally about the specific global problems and their causes. It is about the almost total failure to respond to the situation.

Surprisingly, very few people have concerned themselves with this topic, judging by the fact that very little has been written on social responsibility. The issue is hardly recognised, let alone debated, let alone worked on. Higgins identifies the puzzling

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indifference and apathy regarding the problems threatening to destroy us as "The Seventh Enemy", the title of his book. Another considers humans as "Our Own Worst Enemy". Others have assumed that our situation derives from some evil or perverse element in human nature. This essay argues for a much less spectacular explanation, and asserts that the solution is theoretically simple and easily implemented, if we want to take it . . . which is not likely.

So why do we have the problems? Why do we not solve them? Put simply, the main reason we do not solve the major global problems and the main reasons why humans have endured unsatisfactory social conditions for aeons is because most people are not very or not at all interested in the problems or in solving them. If most people were sufficiently concerned about unemployment or poverty or hunger then the necessary action would be taken immediately. In human societies in general there is, in other words, little social responsibility. The fate of the planet hangs on whether it can be suddenly and dramatically increased.

Some cases

Reflecting on the appropriate response a "normal" human being would have the following situations. How would you like to make breakfast for your children knowing that the water you are using is literally deadly, that it is contaminated and that using it has already killed one of your children, but you have to use it because there is no other water available and there is not enough fuel to boil it . . . and that most of the world's fuel is being taken, i.e. bought, by the rich countries to run their sports utility vehicles and to go on jet-away holidays. More than 1 billion people do not have safe water and about 6,000 die from this cause every day. What is the proper or appropriate response to this situation? Surely, it is a mixture of furious rage, feelings of how terrible it would be to be in that situation and a powerful urge to fix the situation immediately so that no one ever has to suffer it again.

In the video Bolivia; The Tin Mountain we meet Cesar who has worked every day for 13 years drilling for tin, with his cheeks puffed out by coca leaves to numb the mind from the boredom and the hunger. Where does the tin go? To make the tin cans on our supermarket shelves. Cesar is lucky because he has a job. When the video was made the mine was killing one person a day, mostly from the dust, which causes silicosis TB. It killed Cesar's father and he now has it. It is fatal. He is weak and has difficulty in walking. But if he does not work his family will be evicted and literally destitute. He should be in a sanitorium but there he is in the truck on his way up to the mine again. He is totally and inescapably trapped and he will die in that trap and he knows it. How do you feel about that?

We can literally multiply a story of that kind by millions. Tens of thousands of people die every day, mostly children, because they are trapped by their economic circumstances in conditions of appalling deprivation. But this is only part of the story. The important part is that many of the people in the world who are most deprived and impoverished are working to produce things that the rich one billion in this world buy in our supermarkets, or are excluded from access to the resources around them by a development process geared to those supermarkets.

In another video I have seen a young African man with a metre-long Guinea worm in his leg can do no more than tie a piece of cotton around the protruding tail. How long has he been like that? What will happen? More than one billion people have no access

to even the most rudimentary medical care. These conditions exist because our social arrangements deliver obscene wealth to a few and deprive many of basic necessities. Yet in general the few of the world's people who benefit most from the way the global economy works seem to be totally indifferent to the grinding situation billions endure, or to the causal factors, or to the fact that their comfort and affluence are among the causes.

What can you say about a society in which it is legal to keep a chicken for its whole life in a cage the size of an A4 sheet of paper, a society in which too few care about this to make it illegal?

In the present economy, if a firm can beat many others to the scarce sales opportunities and take their business and deprive them of the livelihood they once had, that is quite acceptable. If no businessman can make money by giving you a job then you will be unemployed. That is an absurd and infuriating way to determine access to work and livelihood. In Australia one to two million people are forced to put up with everything unemployment involves because we refuse to move to a sensible system whereby everyone who wants work somehow gets allocated a share of the work to be done. This could easily be organised with a small amount of initiative, on the part of the state or via local groups regardless of the state. It is done in the Israeli Kibbutz settlements. Taxes might have to be increased a little to cover the added costs to employers. (But there would huge savings in the elimination of stress, illness, suicide and unemployment payments.) Now if only a small number of people wanted this done and were prepared to vote for the party that proposed it, it would be done. But any party that made this a priority in its platform would be committing electoral suicide. The indisputable fact is that there is virtually no interest whatsoever in doing it. People in general could hardly care less about eliminating the experience of unemployment.

Consider the astounding level of economic injustice evident in a global economy which delivers affluent lifestyles to about 15 per cent of the world's people, by enabling them to take most of the world's resource wealth, and thereby deprives billions of people of their fair share of it. This is the normal and inevitable way the market system functions. For example more than half the best Third World land is growing mostly luxury crops such as coffee to export to rich countries while those who work in the plantations are among the poorest and hungriest people in the world. What would the goods in our supermarkets cost if the people who produced them in the Third World were paid a decent wage. People who make shirts in Bangladesh are paid 15c an hour. How much coffee would we get and what would it cost if most of the 20 million hectare producing it in the Third World were growing food for hungry people? But apparently in general people in rich countries could hardly care less about any of these things. The Third World problem has slipped off the public agenda in rich countries. (An indicator is the fact that in the mid-1990s aid had fallen to around 10 per cent of the amount poor countries were paying back to rich countries every year as interest on their debt.)

Now consider the core assertion in economic liberalism, i.e. that the best way to organise an economy is to let a few who are extremely rich and who own most of the capital and productive capacity decide what to produce, by asking themselves what will maximise their profits and wealth, with as little social control and regulation over what they do as possible. This is the principle on which the global economy works. It is rapidly reducing the already appalling living conditions of the poorest of the world's people (see extensive evidence at www.arts.unsw.edu.au/tsw/DocsGLOBALISATION.

html). Within the anti-globalisation movement there is some discontent with this situation, but a negligible number of people in rich countries are calling for fundamental change from a consumer-capitalist society.

The most stunning and important blind spot of all is to do with the manic obsession with the limitless pursuit of higher living standards and economic growth, when present rich world levels of consumption are already far beyond those that are sustainable or that all the world's people could ever reach. We are grossly overproducing and over-consuming and, therefore, racing towards catastrophic breakdowns on many fronts, especially with respect to the environment and the depletion of crucial resources. The rich world per capita "ecological footprint" is about six times the area of productive land available to each person on the planet. We might be within a decade of the peak in petroleum supply. If this is so then the consequences for a world extremely dependent on petroleum will be unimaginable. Two billion are fed by fertilisers produced from petroleum, and 480 million by the groundwater pumped by it. The Australian per capita carbon dioxide emission rate is more than 20 times the limit that the climate scientists are telling us will be the sustainable maximum.

This detailed and overwhelmingly convincing "limits to growth" case has been accumulating for 40 years (www.arts.unsw.edu.au/tsw/06b-Limits-Long.html). Obviously, there is far too much producing and consuming going on yet there is almost no recognition of the analysis at all among politicians, journalists, educators, economists or the public in general, who all remain blindly and fiercely determined to pursue ever increasing levels of income, consumption, investment, trade, business turnover and GDP.

The appropriate emotional response a normal human would have to the kinds of cases and situations indicated above is intense outrage and anger, a severe, painful compassion for the human beings who suffer these experiences and a desperate panic-like urge to do something to get rid of the problem right now. If your car were to roll onto your dog or your baby daughter, how would you respond? To put it mildly you would feel distressed and you would leap into action because every microsecond would count. If you were there, beside someone who is malnourished, or one of the thousands of children who lose their sight each year because of vitamin A deficiency that could be remedied for a few cents, what would you feel? There is no doubt whatsoever that you would be very disturbed. You would suffer too; in fact any normal person would probably never get over such an experience. And you would feel a powerful drive to do something to get rid of the problem as quickly as possible.

Even more puzzling and annoying than indifference to the plight of others is the failure of people to respond appropriately to social problems which directly impact on their own welfare. Take for example the huge deterioration in health services that have occurred in Australia in the last 20 years as governments have cut spending. I have just been listening to an account on ABC Background Briefing (7 July 2001) on the crisis now set by the many nurses who are leaving their profession because of the stress caused by insufficient resources. A patient interviewed was a bystander injured in a bar room brawl and in need of surgery. He had been sitting in a waiting room for 12 hours. In another case an elderly man was left unattended on a trolley for a long time, fell off and broke a hip. In 1999 a report estimated that every year possibly 18,000 Australians are killed by mistakes made in Australian hospitals. The figure is

incredible, 40 people every day! . . . but there was no outrage. There was in fact almost no comment. People simply accept all this even though they themselves suffer the consequences. They apparently do not care even though many of them will end up in those waiting rooms every day.

To take a final example, rich people pay little or no tax. The Matthews Report on Australian Taxation said the problem is not to get the rich to pay more tax – it is to get them to pay any tax at all. Half the foreign corporations with branches in Australia pay no tax at all! (That is why the hospitals are so bad.) But evidently no one cares. There is no discussion or outrage about this. How long would this situation continue if people in general did care, just a little, let alone if they were bellowing with rage as they should be.

A "normal" human being cannot but be wounded and feel pain by exposure to another who is suffering serious harm, or to a social issue where there are grossly unsatisfactory effects. (Of course the reference here is not to statistically normal, i.e. typical humans.) The problem of social responsibility is that there are very few normal people. It would seem that we must accept that most people are zombie monsters.

Zombies are dead. They are not conscious of their surroundings. They do not grasp what is going on around them. And only monsters can be in the presence of extreme injustice, suffering or destruction without being emotionally shattered. Clearly our problem is that most people are zombie monsters.

The proximity to the suffering is not crucial here. Just to know that somewhere in the world a child is hungry should evoke profound disturbing compassion in any "normal" human. But it does not and the research task is to understand the forces and conditions that generate these dispositions and behaviours. Is distance in time any more significant? Should the Irish Potato Famine evoke within us a different response to a current famine?

Somehow we humans seem to develop an emotionally protective cocoon, a shell which ensures that the emotional significance of things we know about does not get through. When we hear on the news of a murder or a famine it usually has little or no emotional impact. Occasionally the emotional significance of something does break through and we get a shock. I was sitting on a quiet railway station recently, daydreaming, when a train I had not heard approaching suddenly thundered through jolting me into fear at the sense of tremendous noise and power and violence, and how puny a human body would be if something like that ran off the rails. My mind raced to what it must be like to be in a grass hut on the Bangladesh floodplain when a cyclone comes through hurling palm tree logs like straw. It made me feel how absolutely terrifying it would be if a tank ran over your mud hovel. It made me think how immeasurably important it is to make sure that things like that never ever happen to anyone. Yet on that same day I probably heard of many violent deaths on the radio news without being moved.

Obviously to respond emotionally to all such information would be totally debilitating, but to not respond emotionally at all is problematic. Central in the problem of social responsibility is this emotional shell that inhibits an appropriate response.

Consider war

How many wars would not have happened had there been just a little more social responsibility? How many appalling bungles on the part of kings and politicians too

arrogant to back down or to question their prejudices or listen would not have led to armed conflict if publics had had even a little more sense, let alone had they demanded to be given a full, clear and convincing account of the situation and why war was a the appropriate option. For a start World War I could not have happened (20 million dead), which ended in a way that set up World War II (another 50 million dead), which ended in a way that set up the Cold War and the nuclear arms race (nearly another 5 million dead; see the film *Thirteen Days*.)

Millions of men eagerly enlisted to fight in World War I without the slightest understanding of the issues. How many would have been so eager had they clearly understood that for centuries previously Britain had killed and looted and enslaved and fought 72 colonial ways to acquire, i.e. conquer, an empire – but was monumentally offended when Germany tried to push into the same plundering game? World War II in the Pacific was in large part about the Japanese having the same effrontery, seeking to grab an empire and thereby threatening the empires the British, Dutch and Americans (the Philippines) had previously grabbed, and having their access to oil blocked by the Americans.

The "All the way with LBJ" Australian political leadership tripped over themselves in their eagerness to get us into the Vietnam war. In fact it seems that Menzies could not wait for the call and badgered the Vietnamese government to invite us. When we now look back over the graves of 500 young Australians surely we grasp how extremely important it is that a nation's people have the capacity and determination to discuss such an issue competently and thoroughly and to get the right answer. Again this is inconceivable without a far higher level of social responsibility than there is at present.

At the time of writing this a handful of Americans have decided to launch that country into a war on Iraq. One man, the Australian Prime Minister, has decided that if they do, Australia will help. Such a war could mean 10,000-200,000 Iraqi civilians would be killed. What is most remarkable here is that Australian people have allowed this situation to develop, a situation in which one person has the power to decide whether or not we are going to inflict massive destruction and death on another country and in which, if he did make such a decision, people would comply with no more than a little grumbling.

So from time to time the issue is whether our children should be sent to slaughter the children of other people just like us. At such times you begin to wish that one or two generations previously someone had put in place the educational, media, political and cultural institutions that would have ensured that now people in general were able and determined to work out what is the right thing to do.

Of course, if we had any significant level of social responsibility then wars would never occur in the first place. The time to end a war is several years before it breaks out. If and when it comes to blows then you have failed abysmally to do the sensible thing, i.e. to see trouble coming, to work out accurately what is causing it, and to face up to the fact that often it is our own greed and previous thuggery that has been the major causal factor.

Now reflect on the probable near future of armed conflict on a planet in which one fifth have levels of resource consumption that are 17 times the average of the poorest half, resources are alarmingly scarce, the global economy is essentially a system that enables the rich to take most of them, the number of people scrambling for them will

soon be eight to nine billion, the poorest of those billions are eager to be as rich as the rich few, all economic and development theories assume without question that getting rich is what development is about, and we in rich countries are determined to be at least eight times as rich by 2070 – this set of conditions provides a watertight guarantee that the coming century will be one of extreme and massive armed conflict.

Rich world affluence would not be possible in a just global economy. We could not be affluent if we were not getting most of the scarce resources, and gearing the productive capacity of the Third World to our benefit. The system is kept in place mostly by acceptance of the market system, which automatically enables the rich to take most of what is available and to develop what is most profitable to them. But in addition our empire cannot be kept in place without violence, especially without supporting the brutal regimes that will follow the policies that suit us. Poor Third World people would prefer that their soils and fisheries and forests and labour were put into development that would produce things they desperately need. But the regimes we support ensure that the land and labour go into producing exports to enrich themselves and our corporations and shoppers (for detailed documentation on the maintenance of our empire see summary at www.arts.unsw.edu.au/tsw/10-Our-Empire.html, and collected documentation at www.arts.unsw.edu.au/tsw/DocsOUREMPIRE.html).

Thus, if we wish to remain affluent in a world where affluence is not possible for all, we must remain heavily armed. We will need military forces to defend "our" oil fields and mines. If, on the other hand, we want security it cannot be achieved without global justice. Security can only be found in a world where no one takes more than their fair share. Yet in general international relations are about everyone trying to outsmart or intimidate everyone else to take as much as they can.

Responsible citizens would see that the only solution to the scourge of war has to be in terms of transition to lifestyles and systems that enable all to live well without taking more than their fair share.

The power of the masses

The painful irony is that in general it would only take the most miniscule response on the part of the mass of people to quickly remedy the kinds of situations and policies noted above. For at least thousands of years billions of people have suffered social and political conditions that were somewhere between bad and appalling. Although some societies seem to have been remarkably satisfactory, especially many tribal societies, in most a few thugs and manipulators have dominated the rest. They have bossed and bullied and hogged most of the wealth and privileges and sat around in luxury while others had to work to provide for them and often have had to fear for their lives. How could this be?

In the world today there is an enormous and increasing problem of domination. A tiny few are taking most of the wealth and running the world in their own interests. In America, the richest 1 per cent have more than half of all the capital and more wealth than 90 per cent of people. The rich manage to keep in place systems in which the majority of people increasingly work mostly for the benefit of the few while billions either get relatively little in return, or are totally "excluded". The present global economy probably only works well for less than 10 per cent of the world's people. (Foutopolous, 1997) Inequality is rapidly increasing. Globalisation is giving the

corporate super rich the freedom and the right to take even more and to condemn more people to miserable conditions. Even the rich world's middle classes are being driven off the levels of affluence and comfort they have become accustomed to. But few seem to see any problem with the domination that exists, nor with other problematic conditions such as the unnecessary competition, the shoddy products, the plight of those dumped into unemployment and poverty.

All this could be thrown off very quickly if there was a significant amount of concern about social problems and their causes. The many tyrants and bullies and plundering ruling classes that have made life a misery for countless people throughout history could have been tipped out at any time had a significant proportion of their victims said "Enough! Get out! From here on people around here will run things in everyone's interests". What proportion of people today in Australia think like this?

Chomsky puts it in terms of Hume's paradox; "... in any society the population submits to the rulers even though force is always in the hands of the governed ... the rulers can only rule if they control opinion – no matter how many guns they have" (Chomsky, 1986-1992, p. 81). Gandhi put it more colourfully noting that if all Indians merely spat the British would drown.

Of course, a few do respond appropriately, but very very few. At the peak of the Peace Movement, when the Cuban missile crisis brought us very close to nuclear war, only 0.7 per cent of Australians marched on the main annual protest day.

In other words, who is the problem? Rarely is power taken and exercised against the will of the oppressed. Mostly power is given, permitted. Legitimacy is about acquiescence. The problem, therefore, is not the few who the situation benefits, it is the many who accept situations, which disadvantage themselves. Yet the focus of dissenting thought and action has usually been the dominators and scarce energy and resources have typically gone solely into (usually self-destructive) struggle against the dominators – when they are not the crucial element. The key is the consciousness of the dominated. If only a small proportion of them came to see the situation differently, as illegitimate, the dominators would be immediately dumped, probably in non-violent ways, perhaps simply by being ignored from thereon.

Of course, the persistence of unsatisfactory social conditions is usually due in large part to the fact that a few have far more capacity than others to influence ideas and decisions and, therefore, to keep in place the arrangements that suit themselves. But again if many people objected those situations would be changed. It takes remarkably little public outcry or action to get things changed. Publics are like large and fierce dogs that sleep most of the time allowing a few sneaky mice to get away with what they want, but if they are roused and angered just a little the mice have to scurry for cover. In 2001 the very powerful drug corporations moved to stop the South African government from producing anti-Aids drugs at a price Africans could afford, below the prices the obscenely rich drug corporations wanted to charge. Drug companies have got away with these kinds of actions for years, including refusing to develop the drugs that would do most good in the world, i.e. drugs for the diseases that afflict Third World people, while focusing on the high priced and often trivial lines that sell well in rich countries. (For instance only 1 per cent of new drugs developed are for tropical diseases.) Somehow the tiny groups working against the drug companies in the South African case managed to stir up enough public attention, not much really, but enough to panic the drug companies into giving up. The space in our newspapers given to this

issue at its peak would have been about 0.1 per cent of that given to sport, but that relatively minute amount of public interest and discontent was enough.

Just ask for how many milliseconds would any other outrageous situation last if people in general became appropriately aware of it and annoyed about it.

Psychological factors

It seems that we can discern three psychological components of social responsibility:

(1) the intellectual capacity or readiness to see, attend to, focus on unsatisfactory situations;

(2) the emotional response of feeling discontented about the situation, empathising with those who suffer the consequences, and feeling strongly that something should be done; and

(3) the will, the urge to take some remedial action.

The first factor would seem to include the capacity to recognise the relative importance of things. The opposite of this is preoccupation with trivia. Postmodern society is characterised by a stunning level of preoccupation with trivia. Most people spend most of their time doing or thinking about things that are of no importance whatsoever in view of the global situation we are in. All around us there are serious, skilled, intelligent, conscientious people who actually think it is important who wins the next test match, or that it is important to write another cookbook, or dictionary, or buy that album, or make a career move, or work for years to win a gold medal or shave one second of their PB. Turn on the radio and imagine what a visitor from Mars would conclude about our mentality – he would get no clue that one-fifth of us are hungry, or that petrol supply will probably peak in ten years bringing on a collapse of industrial civilization that might kill off 2 billion of us.

The tendency to "familiarise"

Social responsibility seems to involve a powerful tendency in human minds to make the world familiar. We seem to have evolved in ways that make social responsibility difficult for us. We are wired to respond immediately and appropriately to problems that directly confront us as individuals or our families, but our evolution for millions of years in tribal groups does not seem to have developed much capacity to recognise and respond to abstract social issues that we do not experience directly or immediately, that might require critical thought about social structures and systems, and that might manifest themselves to us only in the form of dry statistics, or that only involve experiences that will not occur until far in the future.

We have a strong tendency to normalise and routinise the world, to adapt, to focus on the immediate, everyday, familiar world of ordinary routine. We have a strong tendency to construe our world as intelligible, predictable and non-surprising, and to tune out disturbing information and ideas. We like a familiar world. Some degree of novelty and excitement is welcome and is given immediate attention, but in general we like to feel that we know our everyday world well and need not expect to be thrown off balance by confronting things that are inexplicable or strange or troublesome. Indeed it might be said that the typical state of mind *homo sapiens* defaults to is borderline boredom.

The paradox is that we actually live in a puzzling, indeed an incomprehensible universe. We cannot even get our minds around things like where is its boundary – if it has one what is on the other side of that – and if it does not how can something spatial not have any boundary? We do not worry about such questions. We hardly ever think about them, let alone become disturbed by them. We choose to define that problem out of our everyday world and to construct ourselves into a familiar, understandable and routine universe enabling us to get on with the immediate business of living from day to day.

Yet when ordinary people are directly confronted face-to-face with another in serious trouble, for example at an accident scene, there usually is an appropriate emotional response, and an appropriate urge to do something to solve the problem, leading to immediate and energetic action. But social responsibility is about something different. It is to do with the failure to respond appropriately to social problems that are known about only at a distance, problems such as unemployment, homelessness, the destruction of the environment, the poverty of the Third World, corporate tax evasion, slave labour, youth suicide, homelessness, and political corruption. How can we get to the stage where being confronted by statistical information about distant social issues evokes strong feelings of anger and compassion and strong desire to solve the problem?

This capacity for indifference is very likely to have considerable functional significance for the human mind. Obviously to become disturbed about every problem one hears about would be totally debilitating. Everyday functioning seems to be made possible by mechanisms that enable us to see the world as routine, ordinary and non-disturbing. It would seem that we have a strong predisposition to set aside disturbances and to focus on, attend to interpretations of our situation as familiar, the OK world, the taken for granted.

In Berger's (1966) terms it is the task of the sociologist to practise "exstasy", by which he means standing outside one's society's normalising definitions and interpretations, in order to recognise and study its practices and assumptions. When this is done the ordinary can come to be seen as extraordinary, problematic, a puzzle to be explained. "Why do these people think appearing without clothes is embarrassing?" The connection with social responsibility here would seem to be in coming to see something that is ordinary, unremarkable and non-problematic as a multifaceted problem, a cognitive, emotional and volitional problem. "Why do these people not respond to that".

Sartre's (1969) account of "bad faith" would also seem to be relevant to our problem. He noted how people tend to appeal to concepts such as "duty" to justify action, e.g. where a soldier says he had no choice about doing something because he had to obey orders. Sartre emphasised that one is always totally free to choose this way or that, although the consequences of some choices might be extremely unpleasant, and thus the appeal to social norms and conventions is an invalid denial of responsibility. Yet it is understandable given the dreadful burden of "angst" that full recognition of freedom brings. I am for example quite free to draw all my savings from the bank and give them to an aid organisation that would use them to save many lives. I am totally free to bring about either of the two sets of consequences that would follow from acting or not acting in this way, so it is not surprising that we tend to cling to concepts like duty to enable us to deny the existence of such "dreadful" freedom and responsibility. Note that

responsibility here does not mean obligation. It is simply a reference to the fact that my action will cause, bring about one set of consequences or another.

Some sociological connections

There are many ways in which capitalist-consumer society weights heavily against social responsibility. First, the sheer size of modern societies is a problem. Social responsibility is facilitated by smallness of scale, so that people are able to get together to take some control over their local affairs. When societies are big individuals feel powerless and things are inevitably left to "leaders" and bureaucracies at the centre.

There have been societies in which there would seem to have been a remarkable degree of social responsibility. In ancient Greece citizens put a high priority on the discussion of public affairs and participation in government. (The word they used for anyone who did not do this much is said to translate into English as "idiot".) Bookchin (1967) explains how they saw this as not just a duty but as a crucial element in the education of the citizen. Unlike our society, the individual was trusted with making decisions concerning the welfare of society and was, therefore, conscious of the responsibility and of the importance of helping to sort out issues effectively and to find the right answer. There were issues which the Greeks failed to question, most obviously the use of slaves and the exclusion of women from public affairs, but in a world where the norm since the tribal period seems to have been unquestioning obedience to tyrannical kings and states the Greeks stand out for the remarkable extent to which citizens concerned themselves with social issues.

Bookchin argues that the situation was similar in Medieval towns and in the towns of New England USA. Ordinary people carried out the governing via highly participatory democratic procedures and were, therefore, very involved in the discussion of social issues. In both cases the situation would have provided powerful incentives because small isolated communities without a state to provide for them knew they had to take responsibility for their own fate. Many of the Israeli Kibbutz settlements, and the intentional communities of the Global Eco-village Movement also involve remarkable levels of social responsibility on the part of ordinary citizens.

Class

Of course, most of the blame must fall on the rich. It is in their interests that the mass of people are acquiescent and they go to a great deal of effort to reinforce the system and to goad people to be rampant consumers and to preoccupy them with trivia. (It is reported that US spending on "marketing" is now said to exceed $1t per year.) The very rich own the media and they can hire the intellectuals, especially economists, to do the vital work of maintaining the dominant ideology. In any society there are taken for granted ideas defining what is normal, right, to be accepted, to be done, and not thought about. Not surprisingly the ideas that are taken for granted regarding privilege and inequalities are in general the very ideas that the rich and powerful few would like us to hold. So for instance in our society just about everyone accepts that market forces should determine the distribution of resources and what is developed, and that it is in order for the strongest corporations to take all the sales, resources and markets that millions of little people once had just because they can produce more cheaply.

Marxists tend to exhonorate the working class (which in their terms includes most of what is usually referred to as the middle class today, i.e. the highly paid technocratic and professional workers), attributing all social ills to the capitalist class. Clearly their account of ideology explains much about the lack of social responsibility, but the working classes in rich countries are also culpable. Yes they are under great stupefying pressure, but they know that many people in the Third World endure very unsatisfactory conditions, producing their coffee and running shoes. They eagerly devour the trivia and the sport and spectacles. (An Australian today lost the Wimbledon tennis final, and the first five pages of *The Daily Telegraph* were almost entirely given to the event.) Corporations cannot make profits unless people buy their products, and working class people are no less happy to buy the products from Third World plantations and factories than are middle class or rich people.

Although the lowest classes are the ones most impacted by the injustices within their own societies, they show little or no sign of discontent. They endure the waiting rooms, and then pay the outrageous specialist and legal fees without dissent. They would rush to be rich and privileged if they could, with little or no thought that in a world of great scarcity this is not possible for some unless many are deprived. They buy the magazines that idolise the lifestyles of celebrities. Not surprisingly evidence of discontent does not increase as attention shifts from the lower working class to the "excluded", and the "welfare" industry which manages them. The acquiescence of the victims and their minders can be more disturbing than the smug complacency of the privileged.

But surely it is the middle class that is most morally problematic. They are "educated" and literate, so they know more clearly than others that bad things are happening and they are in the best position to take action, and if even a tiny proportion of them spoke out the world would change. It is not a matter of courage or intimidation or powerlessness. There is no danger in speaking out. The problem is simply that taking social issues seriously seems never to occur to most of them. They are too busy thinking about the coming career move, the kitchen renovation, the trip to Bali, getting the kids into that private school, their investment plan and the wine rack.

The power of affluence

The addiction to affluence seems to be an especially important impediment to social responsibility. There is considerable readiness among the small green, left and anti-globalisation groups to attend to the injustice of the global economy and to worry about what globalisation is doing. But critical tendencies seem to instantly disappear the moment it is suggested that over-consumption or affluent lifestyles are a problem, let alone the major cause of global problems. What almost all people seem to want above all are wealth and possessions, property, travel, comfort, status, a nice house, financial security, and a good investment fund manager. In general even those professing concern about the environment refuse to listen to anyone suggesting that a just and sustainable world order is not possible unless there is dramatic reduction in rich world per capita levels of consumption. This is glaringly evident in the failure of peak aid, justice and environmental groups to give any attention to the problem of affluence and growth. Unfortunately, most "intellectuals", including those on the Left would strongly prefer to think critically about anything but challenges to their own material comfort.

These comments derive from decades working at the task of drawing attention to "the limits to growth" analysis of the global predicament. Those of us who have been doing this can testify to the immense difficulty of getting anyone to take any notice. Indeed the readiness to attend to "limits" themes is distinctly less now than it was decades ago. (Hence, David Suzuki regards himself as a catastrophic failure.)

The performance of the Left is especially lamentable here. Marxists have seen emancipation in terms of turning up the throttles in the factories "so that everyone can have a Mercedes", and have tended to be among the last to acknowledge that an ecological sustainable society cannot have affluent living standards or a growth economy. It is one thing to be boldly socially responsible when that involves blaming the capitalist class for all the problems, but it is quite another when one's own "living standards" are suggested as a cause.

Individualism

The individualistic strand in western culture is clearly central in our topic. Consider the fact that during the "great depression" large numbers of people were forced to suffer intense hardship, when in principle it would have been easy for people to get together to organise the collective production that would have given everyone the means to a frugal but adequate life – the collective gardens, workshops, poultry pens, social activities, entertainment and social services. It is not just that authorities did not do this. More disturbing is that except in a very few cases it did not occur to the victims to do it.

Individualism weakens awareness, resistance and action, since it casts problems as things individuals must grapple with or accept on their own, as distinct from problems that might be tackled collectively. If you think collectively you are more likely to think about how others and the group are faring. In an individualistic culture even the capacity to think in terms of what is wrong with social arrangements is impoverished. Problems, adversity and deprivation are more likely to be interpreted as due to individual failure to achieve, stay at school, work hard, etc. rather than as due to faults in society.

Intellectuals

The problem of lack of social responsibility is in large part due to the massive default on the part of the "intellectual" ranks in society, the teachers, writers, journalists, professionals and especially the academics. These are the people who are most highly educated and are supposed to be the thinkers, analysers and educators. Their cleverness enables space travel, computers and atom splitting, yet historically the intellectual classes have failed to think critically about their society and have served the privileged classes (which hired them). Today only a very small proportion of them ever attend to the critical issues now confronting us (in my estimate, less than 1 per cent of those in my university.) Even less ever speak out on the issues that now threaten us with mass die-off.

This is a huge and inexcusable moral failure. These are the people with the intelligence, education, position, security, comfort and time to at least draw attention to the problems. They are supposed to be the deep and critical thinkers. Questioning fundamentals and assumptions is supposed to be their role. Yet almost all of them refuse to think about or comment on the core justice and sustainability problems,

let alone work on solutions. A considerable proportion of them teach conventional economic theory without any reference to its flaws or its central role in causing the global situation, let alone to critical or alternative economics.

Most academics even within the "humanities" devote themselves to studying and teaching about topics that are of the utmost triviality given the situation we are in. We do not really need another translation of Ovid or treatise on Medieval poetry or a dictionary of Australian slang. Indeed right now we do not need anything going on in many entire fields of academic inquiry, such as Linguistics, English Literature, or Astronomy (. . . a keen hobby interest of mine). Let us get back to such things later if we can after we save the planet from collapse and make sure no one is hungry.

Academics spend many years learning how to research, but their training allocates no time to the question, "What kinds of problems ought I apply my skills to?" Evidently it never occurs to most of them that they should devote their talents to trying to do something about the terrible problems impacting on people all around them and indeed now threatening their own privileges. Most enjoy extremely privileged work conditions, with great freedom to decide what to work on. Most exhibit immense self-indulgence in their pursuits, often following unimportant obsessions, totally free from challenge regarding relevance or misapplication of scarce resources.

The neglect cannot be explained in terms of fear or danger. It is not that courage is required to study the crucial topics despite the opposition of authorities or public opinion. It is simply a matter of complete indifference, the absence of any sense of the importance or necessity for these issues to be taken up, and the self-indulgent study of what is fond to be most interesting. How can one explain that of the many thousands of well-paid academics in Australia barely a handful are grappling with the core sustainability problems? And what does this say about our potential for saving ourselves?

One occasionally encounters the claim, "People think it's wrong, but what can they do about it?" In other words, sometimes it is argued that the problem is powerlessness, not indifference. The argument is easily refuted, by pointing to the absence of rage. Social responsibility involves concern of such a magnitude that the emotions and the will are moved. Social responsibility blocked by powerlessness could, therefore, be expected to manifest intense discontent. Yet what we are dealing with is indifference.

Postmodernism

The advent of "postmodern society" can be taken as the entrenchment of all that denies and destroys social responsibility. It is an era in which attention is focused on trivia, fleeting images and experiences, celebrities, spectacles, thrills, sport, TV, and moment-to-moment hedonism. Satisfaction comes from purchasing ephemeral, throwaway products and experiences, so dissatisfaction quickly returns. Ever-increasing levels of violence, destruction and horror are required to satisfy debauched audiences. The focus is on the superficial and fleeting, so underlying purposes, structures, meanings and historical origins are not thought about.

The forces of consumer-capitalist society have removed most sources of deeper purpose or identity, such as the experience of community, self-sufficient household production, participation in self-government, crafts, hobbies, life-long trades, while providing easy access to superficial replacements such as TV and computerised

games. For many it has eliminated the notion of career, which once provided central and lasting identity, purpose and satisfaction. Now many jobs can be expected during a working life.

As Harvey argues (but not well) all this aligns beautifully with the needs of late capitalism, which has brought it about. The system must maximise the amount of purchasing going on, so frenetic consumption of throwaway products, pop music, celebrities, spectaculars and fashion is highly functional. Image and identity must be sought through purchases, for instance of branded products. Because satisfaction cannot be found in the consumption of such short-lived trivia, the drive to consume is never satiated. The only solution for discontent is to go shopping again. The only available salve for the dissatisfaction the system generates is to feed the system with the ceaseless consuming it requires.

In addition, the process deals very effectively with the problem of dissent – because none arises. No police or riot control equipment, indeed no effort is needed to keep the system in place despite rebellious masses – because there are not any…they are all preoccupied consuming the ephemera. Remarkably the very things to which people turn when discontented not only reinforce the system but also increase sales! What do unhappy, anxious, lonely, bored or isolated people do? That is right – they go shopping, or turn to more spectacular entertainment or buy booze or a jet-away holiday or valium or if all else fails, counselling. The very things that dissipate the discontent that the corporations have caused, and dissent that might occur, also make good profits for corporations.

The post-modern mentality even eliminates the kind of thinking that resistance requires. To begin with individuals focused on trivia and hedonism are not inclined to think about social structures and causes or enduring principles like justice or emancipation. More importantly, postmodern theory regards the quest for "totalising" or "universalising" accounts, theories, general social structures and principles as mistaken and futile. Yet without these revolutionary thinking, let alone organising, is not possible.

Rationality

The postmodernists ridicule the enlightenment belief in the power of reason to understand and control the world, and guide the emancipation of human kind. Reason, they argue, has led to the twentieth century wars and death camps, atomic weapons and corporate rule.

Consider also the massive contradiction between the incredible, meticulous rationality evident in the design and construction of a biro, or a wrist watch, let alone a battleship or space shuttle. Reflect on the vast amount of careful, patient, logical thinking, the R&D, the planning, the system development, the discipline, hard work and organisation to achieve all this. Now consider the staggering, incomprehensible, imbecilic lack of rationality evident in, for instance the prison system or the money creation system[1], or any one of countless other examples that could be given.

Postmodernists are clearly wrong here. The paradoxes and tragedies of the twentieth century are not due to rationality – they are due to insufficient rationality and most if not all would be eliminated by the rationality embodied in socially responsible citizens.

Education

Little needs to be said in this context about the failure of the vast and elaborate "educational" systems we have. Suffice it to note that virtually all university graduates have spent thousands of hours over some 15 years, learning things like quadratic equations and Shakespeare and how to make bridges, but they have spent not one minute studying the limits to growth analysis of our probably terminal global predicament. The NSW Board of Secondary Studies lists 47 subjects taught in the state's high schools, but neither social responsibility nor the limits to growth is given space in any of them. Almost none of the students who enrol in my university level course on global problems have ever been introduced to the notion that their society is fundamentally unsustainable and unjust and that their everyday behaviour and taken for granted "living standards" are the direct cause of the global catastrophies occurring all around them.

Evil is not the problem

It is common for those contemplating our appalling history to identify evil as the source of our difficulties. But the overwhelming majority of people are not malicious, i.e. they do not in general have any desire to harm others. A few seem to, or to have little inhibition about doing so when it suits their interests. As Crossman stresses, in general it takes a great deal of effort to turn a human into a killer or a torturer.

Certainly a few "evil" leaders have caused immense harm, but again that is because they have been allowed to. Socially responsible citizens would not tolerate such behaviour for an instant, so evil leaders would not emerge. The planet's misery is not primarily due to any desire to inflict harm – it is primarily due to the indifference ensuring that potentially harmful situations are not attended to.

Citizenship, civilization and social responsibility – consider Ladakh

What is it to be civilized? What are the criteria by which we should judge how civilized a society is. At around 14,000 ft in the Himalayas there is a tiny country, Ladakh, which has thrived in extremely difficult conditions for 800 years. In our terms these people are extremely backward and poor. Their most sophisticated technology is a primitive water-driven grindstone. Their average GNP per capita is almost nothing. Yet this is a complex, culturally rich, and admirable society, with a great deal to teach the rich countries about civility, humanity, community, social justice and ecological sustainability (Norberg-Hodge, 1991).

The Ladakhis are kind and generous. They have extensive community support systems. They look after and value their old people, they have a rich spiritual life, a relaxed lifestyle and robust and sustainable food producing systems despite fiercely cold winters and a short growing season. Their production is labour-intensive, yet the pace of work and life in general is slow, with much time for ceremonies and religious observance. There are powerful formal structures and informal arrangements and traditions that reinforce the strong sense of community. No one is isolated or lonely. They do not waste anything. They have no interest in power, domination or competition. They are very conscious of their dependence on nature, they are multi-skilled and practical, and they live extremely simply in terms of material consumption. There is no crime and no poverty and no drug problem and no social breakdown. It would be difficult to imagine a culture less assertive, aggressive, violent

or warlike. They have a rich cultural and religious life. They use very few non-renewable resources, recycle everything, have a sustainable agriculture, and are ecologically impeccable. Above all they are notoriously happy people.

I have no hesitation in claiming that the Ladakhi society is far more civilised than our society is. Their technology is primitive. Their GDP per capita is zero, their aerospace industry does not exist, but on almost all the factors on which I think a civilization should be rated they are far superior to us.

The essential sociological aspect of Ladakh is that the culture is based on concern for the common welfare. This valuing derives to a considerable extent from their Buddhist spiritual tradition and it is deeply embedded in the social structure. There are rituals and arrangements (e.g. for harvesting, herding, dealing with birth and death) whereby people contribute and are looked after in a cooperative way. When one turns from this noble and beautiful culture to contemplate ours one can only be deeply ashamed. How oafishly inadequate are our arrangements, how grubby are the values that fuel the scramble for selfish advantage and trinkets while trashing our own social fabric and the ecological preconditions for our survival. How proud of all this can one be?

The anthropologist Maybury-Lewis reports a member of a desert tribe saying to him, "A poor man among us would shame us all". Consider the enormity of that statement in the light of the western mentality of selfishness, competition, greed, acceptance of vicious inequality, predation and the readiness to condemn those who fail. (The now-common term "loser" says it all.) The right response to the existence of a poor man is indeed shame and disgust that we have allowed this to happen. If your dog messed in the living room and trampled it all through the house would you clean it up? Would you be content to leave a smelly shambles for others to see? Would you not be ashamed to think that people might judge you to be the sort of person who would tolerate such squalor and not want to fix it up? I cannot see much different between this and being a member of a society that is grossly ugly and disgusting. One cannot but be deeply ashamed of Australian society which has allowed 200,000 young people to become heroin addicts and one million to be unemployed and many young people to become so disenchanted and hopeless that they take their own lives. It is a mark of lack of civilisation that we do not feel intense shame that there are poor among us. Similarly, only barbaric, callous and primitive societies tolerate unemployment. Many societies do not. One cannot but be ashamed to be part of a society that refuses to make any realistic effort to get rid of the scourge.

Conclusions on our situation?

Toynbee analysed history in terms of the rise and fall of civilizations. He concluded that about 26 had come into being, and most of these had died out. (. . . and that ours is dying.) The factor, which he thought determined whether a civilization thrived or declined is its capacity to respond to challenges. It is not technical cleverness or military might or productive capacity or education or wealth or great artistic achievement. Gigantic imperial powers such as Rome can collapse because of the internal failure to maintain the necessary energy, organisation, solidarity, vision or commitment.

Now how do we rate on this scale. For instance how likely are we to respond to the challenge set by the greenhouse problem, to recognise the correct and unpleasant

answer, and then to implement it? The Kyoto agreements only called for about a 5 per cent reduction in carbon emissions by 2010 from 1990 levels, but the atmospheric scientists have told us that to stop the problem getting any worse than it is now we must cut carbon emissions by 60-80 per cent. What has been the response to this challenge by the worst carbon emitters? Australia fought furiously and successfully to be allowed to increase its emissions by 8 per cent and in mid-2001 the US simply refused to have anything to do with the proposals, as soon as it had sunk in that cutting carbon emissions would impact on their affluent living standards and on business turnover. Meanwhile sales of four-wheel drive vehicles have accelerated and the average Australian house size has doubled in a generation. Obviously, there is no possibility of the right response to difficult issues such as greenhouse being made in rich countries until there is a vast improvement in the level of social responsibility within the general public.

But what about our leaders, bureaucracies and parliaments? Are they not there to deal with social problems? The fundamental assumption under this discussion is not just that it is not satisfactory to leave social issues to "leaders" – indeed it is to reject the notion of leadership. If in the far distant future humans manage to establish a satisfactory society it will not be one in which governing is left to governors that is in which people are led. Citizens will govern themselves. The quality, viability and nobility of the society, its level of civilization will be a function of its political culture, its citizenry. These do not depend on the sophistication of technology, the power of military machine, the brilliance of leaders, or the size of the GDP. They depend on the level of social responsibility among people in general. And that is where a society's security lies. That is what gets you into wars or keeps you out. Appalling national policies are adopted because people in general want them, or do not object to them. It is a mistake to see Australia's recent grubby and vicious treatment of refugees as the work of its Prime Minister or his government. It was what the majority of Australians wanted, or would not object to.

Our planetary salvation, or damnation, is in the hands of ordinary people. They are the one's who will determine whether we will do anything about the greenhouse problem, or the Third World or nuclear weapon proliferation. What then matters more than the average capacity of people for social responsibility?

The solution?

Despite the despair transparent in the foregoing discussion, I firmly believe that the solution is in principle simple. Three elements are crucial for the existence of a socially responsible society. These are:

(1) educating for social responsibility;

(2) the development of particular information institutions, enabling understanding of social issues; and

(3) the development of a arrangements whose everyday functioning requires and reinforces social responsibility.

The educational task

Social responsibility does not come "naturally" to humans. It involves ideas, sensitivities and dispositions that must be artificially developed via considerable

conscious effort and social organisation. However, this is no more problematic than developing the readiness to brush one's teeth or get up when the alarm bell rings, actions and habits that are quite "unnatural" for humans yet easily accomplished.

Development of social responsibility is essentially about developing awareness of social issues, concern about them, and readiness to take action, so it should not be very difficult to design experiences for young people which achieve these goals. They would, however, need to be given considerable space and attention within curricula. It is after all the most important of all educational goals. Miracles might be achieved simply by exposing young people to particular themes, especially via films of current and historical problems, social arrangements and utopian visions and inviting them to frequent discussions and reflections and campaigns.

This is not to say that such means and ends could easily be introduced into the educational systems of societies that are unquestioningly obsessed with pursuing the capitalist-consumer path. Existing "educational" systems are remarkably effective in producing the personnel such societies want and there would be fierce resistance to any suggestion that studying for the exams that are the gateway to privilege should make way for the development of social responsibility.

Enabling information institutions

The greatest institutional impediment to social responsibility is to do with the difficulty the ordinary individual has in getting to understand public issues. If it is claimed that a petrol shortage is coming, or some regime is a terrorist threat, or hospital funding is inadequate, or the Great Barrier Reef will have been destroyed by 2050, or the Atkins diet is bad for you, it is extremely difficult for the ordinary person to come to a well informed, clear and accurate understanding of the issue. Usually, there are many interest groups eager to persuade publics to accept their interpretation of the situation and the process of public discourse is typically riddled with dishonesty and deception, including outright deliberate lying, rumour mongering and "spin".

It is, therefore, not surprising that many people make little attempt to understand public issues or that public discourse often involves little more than exchanging ill-informed prejudices and dogmas based on scraps of unreliable evidence and unexamined assumptions. In an era that is defined in terms of information, this is an astounding contradiction. One can easily get abundant information on what video games or cosmetics are on sale, but it is in effect impossible to get even the simplest "one page" analysis of a controversial public issue which one can rely on as sound, let alone as a thorough overview.

Most culpable here is the Left. They fully understand the revolutionary significance of ideology, critical social awareness and the need to form class consciousness, yet far from having worked on systems enabling the understanding of issues, the Left's language and accounts are among the most deliberately turgid, pretentious and obscure, and are typically of interest to only a very few of their own kind.

Of course, there can never be any single "true" account of a social issue. There are always only accounts from different perspectives, which are often irreconcilable and argued with rancour. But this is not a problem here. The accounts we need would succinctly represent the differing interpretations to be found on the topic. The kind of institution we need is akin to a constantly updated and reworked encyclopaedia of current and standing social issues. Some of its topics would be classic issues, such as

the causes of World War I. Others would be current affairs which might come on the scene quickly and develop over time, so the coordinating agency would need to be able to establish ad hoc panels quickly. Although it might require many contributors it would not be a difficult task to organise. Access to its offerings should be the first item to come up when one conducts a web search on a topic.

For any selected issue expert editorial panels would work through the available evidence, theories, and texts to put together a "nested" series of accounts increasing in complexity. The first would be a one page summary statement enabling anyone of any age or with little time to spare, to quickly form a basic understanding of the structure of the issue. The second might be a five to ten page account providing more detail. There might then be a 30 page account, and finally a very detailed account including links to the many related issues and sources.

The task of the panel on the topic would be to help the reader to form his own analysis of the topic in view of the time he wishes to devote to the task, by setting before him the available facts, theories, interpretations, etc. in the most accurate, succinct and helpful way it can. Its task is to represent the state or structure of the issue, not necessarily to resolve it. For example, the panel on the philosophy of religion should have no difficulty setting out clearly and briefly the main arguments that have been given for and against the existence of God, commenting on their validity, difficulty and implications where appropriate.

There should be provision for challenges to the panel's account, and for the revision of accounts over time, and for alternative analyses. All discussion might be archived for those who wanted to delve into it.

Mostly, the accounts provided would come direct from the existing literature, being selected by people familiar with the field as being the best treatments available. But at times the panel would see the possibility of putting together a better account than any that could be found.

The undertaking would be of inestimable importance in clearing away most of the deliberate and unwitting obfuscation that blocks the light now. If individuals knew they could grasp a social issue easily and confidently via this kind of institution there would surely be a huge increase in their willingness to be socially responsible. Citizens would be greatly empowered by the knowledge that they can quickly and easily develop sound and informed views and enter public debate competently.

Social structures that require and reward responsibility

There are strong feedback relations between social responsibility and social structures. In consumer-capitalist society many forces thwart social responsibility, and because there is little social responsibility there is little pressure to improve those structures and institutions. On the other hand, a satisfactory society is not possible without a high level of social responsibility among citizens, and the institutions and structures of such a society would require and reinforce and reward social responsibility. The relation becomes clearer when the core elements of the simpler way are outlined.

If the fundamental criticism of consumer-capitalist society indicated previously, in terms of the limits to growth and global injustice, are valid, then the basic form that a sustainable and just society must take are inescapably given. It must be characterised by much simpler "living standards", high levels of self-sufficiency within small local economies, mostly participatory and cooperative systems, an almost totally new

economy, not driven by market forces and profit and without any growth, and needless to say, some very different values (for the detailed account (see www.arts.unsw.edu.au/tsw/12b-The-Alt-Sust-Soc-Lng.html).

Such a society could not function without strong willingness to contribute to the committees, working bees and town meetings that will run the new communities. Because there will be a extreme dependence on local ecosystems and social systems and because these must be kept in good order, people will have a strong incentive to cooperate and to think about social decisions and problems and to get the right answer for the town. This dependence will radically transform politics to be mostly be about, not individuals and groups competing to get the decisions that advantage them and disadvantage the others, but about the quest for what is best for the community. In addition, "government" will have to be highly decentralised and devolved. There are several reasons for this. There will be too few resources for huge centralised bureaucracies. Only local political processes are capable of understanding and running local systems involving familiarity with complex local ecosystems and social networks and requiring willing voluntary inputs. And in principle government should be carried out by citizens running their own local affairs, and this is only possible on a small scale. Thus, the sham of "representative democracy" will be replaced by participatory self-government.

One's quality of life would derive primarily from the many public sources of welfare, rather from private wealth, effort or talent. In other words, access to commons, community workshops, free goods, artists and crafts people, festivals, a supportive community and mutual aid would be important. Any individual would, therefore, be quite aware of the fact that his or her own welfare depends heavily on the welfare of the community and its ecosystems and, therefore, aware of the importance of cooperatively keeping these systems in good shape.

The smallness of scale will give individuals a sense of being able to make a difference in the decisions that affect them. Participation in the development, maintenance and governing of one's community will be satisfying, indeed this will be a major source of life purpose, self-esteem and enjoyment and empowerment. Contributing to working bees, committees and town meetings will be enjoyable. Thus, there will be many forces built into the situation which reward social responsibility, as well as require it.

The incentive structure would therefore be the reverse of what it is in consumer-capitalist society where all must compete fiercely against each other to be among the survivors, let alone prosper, and there is little reason to consider the public good or the welfare of the other. By contrast, the conditions and characteristics of the simpler way would require and reinforce social responsibility.

Whether or not we are likely to make a transition to the simpler way is not central in this discussion. I do not think it is likely. The central point here is that social responsibility and a good society both require and reinforce each other. The "ecology" of a sustainable and just society is like that of a tropical rainforest. Once established a vast and complex set of actions, relations and conditions among plants, animals, landscape, climate, etc. mutually support and maintain and reproduce the whole system, ensuring its robust continuation over time. Similarly, a good society reproduces the conditions, especially the social responsibility it must have if it is to continue. But if the rainforest is cleared away the land turns to laterite and desert

conditions consolidate and perpetuate themselves, eliminating any possibility of the rainforest returning. Similarly, a bad society reproduces itself and thwarts the emergence of social responsibility.

My thoughts on how we might best work against the heavy odds to begin the building of a just and sustainable society focus on the anarchist vision of "prefiguring". This involves building here and now impressive examples of the new way, so that as the mainstream encounters more serious problems in the years ahead, more people will be able to see that small groups among them are living in ways that make more sense (thoughts on the transition, within www.arts.unsw.edu.au/tsw/D75.ThoughtsonTrans.html).

Note

1. Governments should create all the money that needs to flow into circulation, spending it on public works, and gaining any interest on loans for the public purse. However, almost all new money is now created by private banks when they make loans, and they are paid interest on these. It has been estimated that this costs the British people 66 billion pounds per annum

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Farmer strategies and forest conservation: a case study from south-western Madagascar

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Abstract

Purpose – This paper seeks to evaluate different approaches to forest conservation in the areas outside the national parks of south-western Madagascar.

Design/methodology/approach – Data from a household survey in the area are employed to analyse farmer strategies towards conservation of local forest resources, and present conservation strategies are evaluated in this light.

Findings – It is argued that the prospects for future forest conservation in the area are dim at best, and that any policy proposal intended to remedy this situation must as a first priority establish alternative livelihood opportunities for the local population in order to ensure a minimum of incentives for conservation on their behalf.

Originality/value – The paper is of value to all those interested or involved with sustainability issues.

Keywords Conservation, Sustainable development, Madagascar

Paper type General review

1. Introduction

Madagascar is a global conservation priority because of its rich biota and its exceptionally high degree of endemism. Approximately 85 per cent of all Malagasy plants only exist in Madagascar and 93 per cent of all lemurs are confined to the Malagasy peninsula. Birds are the only faunal group in which the level of endemism is rather low (42 per cent according to ONE (1997)). The Malagasy government is striving to save its unique biodiversity, primarily by establishing a great number of protected areas with minimal human impact, or integrated with economic development in buffer zones (integrated conservation and development projects (ICDP)).

The main focus of the present paper is to shed light on different options for creating mechanisms or incentives to conserve the forests of south-western Madagascar (SWM), without renouncing the livelihoods of the present inhabitants. We limit our focus to the areas presently outside the national parks in SWM, due to the fact that national parks only cover 2 per cent of all forested areas (ONE, 1997), and as we cannot *a priori* assume that Malagasy biodiversity conservation will be sufficiently addressed

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through channelling all conservation efforts into existing or new national parks. The paper explores the present patterns and future scenarios of forest use in the Toliara province of SWM, utilising data from a household survey. We start out with a short description of the study area and a presentation of the key results from our household survey; we go on to analyse the conservation incentives of farmers, and finally we discuss the consequences of our results for future conservation policies.

2. Study background

Most of the primary forest of Madagascar is located in the eastern and small patches in the western part of the country, but not in the highlands. The rate of deforestation is very high in the study area, a triangle starting at Toliara in SWM. It is calculated to yield a rate of 4 per cent per annum over the period 1973-1996 (Ornis Consult, 1998). In 1973, the forest area was estimated at 3,120 km^2, shrinking to 1,316 km^2 by 1996 (Ornis Consult, 1998). Most of the forest is gone in two of the three areas within the study area (near Toliara and near Sakahara). At present, two national parks exist in the study area. At Zombitse, a national park was instituted in December 1997 (Decret No. 97-1454, 1997). The older Isalo National Park is located 50 km East of Zombitse National Park in the centre of the study area.

In other studies it has been indicated that the severe deforestation taking place in the study area is due partly to increased maize farming, induced by depreciation of the Malagasy franc and a subsequent increase in the domestic value of maize (Casse *et al.*, 2003). Although this can probably account for a significant part of deforestation patterns, there are a number of other institutional, cultural and micro-economic features of the local setting that might also have a say in determining agricultural and forest management practices. In this paper, we will focus on the following three hypotheses in the specific setting of Toliara Province, Madagascar:

H1. Subjective perceptions of tree tenure and land tenure security influence the propensity to convert the forest into agricultural land.

H2. Individual characteristics as to the willingness to undertake long-term investment influence the propensity to convert the forest into agricultural land.

H3. Potential as well as actual financial benefits of forest conservation exist, and there are values attached to trees, which are imbedded in the local culture.

3. Methodology

This study is based on a village survey (20 villages) and a household sample in a limited number of villages (six villages). Twelve households were chosen from each of these villages (approximately 10 per cent of total number of households in each village).

We employed stratified random sampling for selection of villages, using deforestation rate and type of agricultural activity as selection criteria. Thus, we selected three villages from area 1 (Ankazoabo), where forest is still abundant, eight villages from the less forested area 2 (Vinetta), and finally nine villages from area 3 (Toliara II), where the forest has nearly disappeared.

The characteristics of the three areas are described in Table I.

Table I. Physical conditions, main economic activities and forest distance at the three sites

Area	Kilometres from forest	Kilometres from Toliara	Number of households	Physical conditions	Ethnicity in villages	Economic activity
(1) Ankazoabo: low degree of deforestation	2-3	90-120	50-70	Annual rainfall > 800 mm Thick forest on sandy land	Bara, Mahafaly, Antanosy (migrants are moving in)	Rice, manioc, maize and cattle raising
(2) Vinetta: middle degree of deforestation	5-15	70-90	80-170	Annual rainfall 700-800 mm Thick forest on sand	Bara, Antandroy (migrants dominate in certain places)	Cotton, manioc, arachide and cattle raising
(3) Toliara II: intensive deforestation	16-25	30-70	85-105	Annual rainfall < 500 mm Dry forest and savannah	Mahafaly, Masikoro, Antandroy (migrants dominate)	Maize, charcoal production

Source: CNRE and ORSTOM (1992) and results from the present study

For the detailed household survey stratified random sampling was also employed, using the following selection criteria: ethnic group, age, ownership to land, and wood collecting activities.

Seventy-four households from six villages among the 20 included in the baseline study were selected for in-depth interviews. The villages were: Ankeriky, Antsoha, Antanimena, Ambahatsy, Lavasadia and Ampamata. Data were collected on basic household characteristics, household income (divided into income sources), present and historical agricultural practices and strategies, as well as forest use. This included specific questions on the exploitation of forest for timber, charcoal and coffin making (see below for a discussion of the latter), in order to establish the economic functions of the forest either as a direct source of income or as a source of supply of additional agricultural land. Also, specific questions were included on the subjective attitudes towards "forest protection" (whether it was desirable, and for what purposes). Another important focal point in the household survey was related to the organisation of space. This included specific questions on land tenure; how farmers obtain authorisation to exploit forest products or to transform the forest into agricultural land; how much they pay to obtain a "permit" to exploit the forest and what kind of other non-timber products were extracted from the forest.

Also, the willingness of respondents to make long-term investments was investigated through two choice experiments. These were undertaken in order to discern the extent to which clearing of forests for agricultural purposes is due to high discounting of future benefits and costs. Two experiments were designed to elicit the respondents' willingness to make tradeoffs between immediate payoffs and delayed payoffs. In each experiment the respondents had to choose among six options. For instance, in one of the hypothetical experiments involving intertemporal tradeoffs (experiment 1), the respondents were asked to choose among the following six hypothetical options:

(1) A (1,000 FMG for payment now and 2,000 for payment one year later);
(2) B (900 FMG for payment now and 2,420 for payment one year later);
(3) C (800 FMG for payment now and 2,680 for payment one year later);
(4) D (700 FMG for payment now and 2,860 for payment one year later);
(5) E (600 FMG for payment now and 3,000 for payment one year later); and
(6) F (500 FMG for payment now and 3,120 for payment one year later)[1].

4. Results

4.1 Economic activities

In all villages, apart from one, peasants indulge in slash-and-burn agriculture (hatsaké), and in most villages, wood collection is part of the monthly life cycle[2]. Nevertheless, only the peasants from area 3 were involved in commercialisation of wood products (fuelwood, and mostly charcoal). Commercial logging is almost completely lacking in the study area[3]. Agricultural production includes the following main crops: maize, manioc, groundnuts, cotton and rice. By far the most dominant crop in slash-and-burn activities is maize (manioc, cotton, groundnuts and rice are also cultivated), comprising 92 per cent of the total of 171 hectares allocated to slash-and-burn agriculture in 1999. Twenty-eight per cent of the total agricultural

acreage is under hatsaké, with 23 per cent of the agricultural net income derived from these fields (agricultural income constitutes 69 per cent of total income – see Table II).

Importantly, many families are ready to spend as much as a total cost of 2-5 million FMG (almost equivalent to an average yearly income) on wood to organize a funeral. In area 2, peasants have to travel more than 15 km to find these species, whereas they collect firewood within a distance of 2-3 km from the village. For most families, expenses for funerals amounted to 500,000-1,500,000 FMG on each occasion. In comparison, the net revenue from maize cropping seldom exceeds 2 million FMG (one family out of 72).

4.2 Forest protection

Peasants responded in the household interview that a value equivalent to two tons of groundnuts was sufficient for them to refrain from encroachment on one hectare of forest. At its highest, land will yield a little less than two tons of groundnuts or maize per hectare. This value showed little variation between the areas and among the families. In money terms, the value is estimated at 2.8 million FMG per hectare.

Confronted with the question of whether peasants believe permanent fields constitute an alternative to forest clearings, in area 3, most of them responded negatively. In area 1, a few families favoured a dam project to reduce pressure on forest resources, while in area 2, mechanization and terrace agriculture were proposed as alternatives to further degradation of the forest. Only one family among the 74 interviewed considered the forest more valuable than a hectare of maize or manioc.

Only seven families claimed that the forest was not protected. Regarding the affirmative responses (all other respondents), the reasons given to the interviewer varied from one area to another. In area 1, families stressed that the forest served as a parking space for cattle; in area 2, forest products such as roots and medical plants seemed equally important; and in area 3, the peasants alluded to the forest values and the spiritual value.

Table II. Average household income in 1999 (agriculture) and in 1998 (wood) ('000 FMG)

Villages	Net monetary agricultural income	Monetary income from fuel and firewood	Imputed value of medicinal plants and roots	Total income (agriculture, fuel and firewood, and medicinal plants)
(1) Antsoha	1,789	84	533	2,406
(1) Ankerike	778	60	98	936
(2) Antanimena	3,678	93	69	3,840
(2) Ambahatsy	1,664	78	184	1,926
(3) Lavasadia	1,771	654	252	2,677
(3) Ampamata	329	1,953	498	2,780
All villages	1,668	476	270	2,414

Notes: Seventy-four households in total. The first two villages are in area 1 (Ankazoabo), the next two in area 2 (Vinetta), and the last two in area 3 (Toliara II). The total medicinal plant sale includes income or imputed income (own use) from marketing of roots, honey, and tenrecs (animal)

4.3 Land tenure

As for the legal status of land use, 33 families out of 49 families practising slash-and burn agriculture in the three areas responded that they consider a license to remove the forest (illegal license from the local forest authorities) as equal to acquiring a land title right. Our results indicate that not less than 42 families out of the 49 practising hatsaké have obtained illegal permits from the local forest authorities. Permits are "sold" at prices varying between 25,000 and 50,000 FMG per hectare.

4.4 Discount rates

The participating peasants discount future consumption at remarkably high rates. In experiment 1, respondents on average discounted the future at an annual discount rate of 208 per cent. In experiment 2 (which involved smaller – and even negative – immediate payments) this rate was calculated at 117 per cent[4]. Moreover, our results indicate that the respondents inhabiting villages in area 3 discount future consumption at a higher rate than farmers in the two other areas (an average discount rate of 162 per cent in area 3 compared to 76 per cent in area 2[5].

5. Forests in south-western Madagascar: stakeholder strategies between forest conversion and conservation

In this section we will discuss the hypotheses introduced in Section 2.

H1. Subjective perceptions of tree tenure and land tenure security influence the propensity to convert the forest into agricultural land.

A plausible hypothesis could be that the future expected benefits from the forest are not taken into account by local farmers, e.g. due to uncertainties as to who are going to be the beneficiaries of forest conservation (absence of clearly defined use or property rights). Whether provision of proper tenurial rights or usufruct rights to forest resources (land as well as tree tenure) is a sufficient condition to halt the deforestation process is yet another issue. Indeed, it could also be argued that increased tenure security could lead to an acceleration of the deforestation process, as the perceived benefits from investing in agricultural activities increase. All forestland in Madagascar formally belongs to the state, but the subjective confidence in use rights need not change as a consequence of a reform of government ownership. New rules of local management of natural resources have recently been applied to selected areas. The initiative is called GELOSE (local management of natural resources) and it focuses on areas located close to protected areas. It aims to deliver rights to land use in provisionally six sites across the country. This includes a national park (Zombitse) within the boundaries of this study area.

In the study area, neither recent migrants nor long-term residents have any legal claim on agricultural land. Only through the use of bribes are families able to obtain "permits". These permits are of course for a limited time span and not transferable. Thus, there are no incentives to protect the forest in order to ensure future productive potential, even though our interviews indicate that the "permit" is perceived as a secure use right by a majority of respondents. A regression of the purchase of "permits" on the application of inputs to cotton production (the crop with the longest investment horizon) reveals a significant positive correlation (at 1 per cent level), thus suggesting an increased willingness to invest in agriculture with increase in perceived tenure

security. Two qualifications to this argument should be noted here: first, the purchase of "permits" would be expected to be dependent on a number of other farmer characteristics (even though we cannot point to such correlations in our data). Second, increases in input investments need not signal a general increase in propensity to convert the forest into agricultural land, as it is only one of several types of intensification. In the literature, it has been suggested that an investment in the cutting down of trees, even though often cited as a short-term investment, also could be seen as a part of a longer term investment in land (Godoy *et al.*, 1999). The results above indicate that this could be the case, if non-timber forest services are not taken into account. All in all, lack of land tenure security cannot directly be said to encourage deforestation through slash-and-burn agriculture in the study area.

H2. Individual characteristics as to the willingness to undertake long-term investment influence the propensity to convert the forest into agricultural land.

There are numerous possible reasons for why high rates of discounting can be observed. Examples include high rates of pure time preference, e.g. due to high subjective perception of risk of death; innate incapacity to postpone consumption; high expected future income growth; high rates of return on marginal investments; prominence of immediate needs in priority making due to poverty; high inflation rate; and lack of access to credit, or obligations to pay high interest rates on existing loans. Incentives to undertake long-term investment can easily be influenced by uncertainties in the tenurial system. This could be reflected in very high discount rates for benefits related to the forest, accompanied by lower discount rates for future benefits in general. The very high discount rates observed in this study do therefore not directly have any bearing on the validity of this hypothesis. In order to shed some more light on the issue, we have instead tested the influence of a number of parameters on a crucial indicator of willingness to undertake real long-term investments in land, i.e. spending on agricultural inputs per hectare.

The results are somewhat clear, as can be seen from Table III.

As expected, education and income level has a positive influence on the propensity to apply inputs. What is more interesting is that tenure security (in this regression a measure of long-term relation to the land is used as a proxy) and the experimentally induced willingness to undertake long-term investments also correlate significantly with propensity to apply inputs. Additionally, the much interesting positive correlation

Dependent variable: Input per hectare (logarithmic transformation) Independent variables	Coefficient	Standard error	*t*-value
Long-term relationship to land ("inherited" land) (dummy)	3.58	2.01	1.77*
Education (zero, primary, secondary)	3.24	1.49	2.17**
Net income (logarithmic transformation)	2.29	0.75	2.58**
Discount rate	−1.92	0.75	−2.57**
Share of income derived from slash-and-burn activity	5.70	3.08	1.85*

Notes: *significant at 10 per cent level; **significant at 5 per cent level

Table III.
Regression results

between input application and the share of income derived from slash-and-burn agriculture is a warning signal that slash-and-burn agriculture is not necessarily a short-sighted investment in conversion of forest into agricultural land, but is an agricultural practice which goes hand in hand with long term investment in land and (subjective) tenurial security. However, as a word of caution, the causality could also be the reverse, signalling an impact of investments in inputs on the income derived from slash-and-burn agriculture. The fact that farmers generally abandon agricultural land for part of the year in the area with the highest degree of deforestation due to productivity decreases points in the direction that slash-and-burn agriculture not accompanied by input investments is not at present a viable long-term livelihood option in the study area.

The fact that a significant difference exist between the observed discount rates in highly deforested areas and the other areas can either be attributed to:

(1) inherent characteristics of the inhabitants in the area which lead to high discount rates and consequently to high deforestation;

(2) high discount rates somehow as a consequence of prior deforestation (e.g. due to fewer available livelihood options); and

(3) other village-specific characteristics, unaccounted for in the analysis, which may influence discount rates.

It is not possible to confirm which is the case from our results.

H3. Potential as well as actual financial benefits of forest conservation exist, and there are values attached to trees, which are imbedded in the local culture.

Today non-timber products are marketed from the forest, and the limiting factor seems more to do with lack of transport than lack of tenurial rights, whereas maize is transported in vans supplied by the private marketing agents living in the provincial capital of Toliara[6].

Even if there are indications that the farmers in general do not see the forest as a valuable resource, there are also signs of the opposite. The social importance of certain tree species due to their functional value in coffin making is evident in the study area. This is exemplified by the extremely high outlays on wood for coffins. The species used in coffin making (daro, karabo, or kaipoty) are available in undisturbed forest only. Since the same ethnic groups are present in areas 3 and 2, families in this area face huge problems in gaining access to the needed tree species when they are supposed to organize a funeral, as area 3 is located even further away from these tree resources. If demand for these species were inelastic, one would expect the travel distance and time spent to acquire the wanted tree species to be much higher in this area. However, in general, families in area 3 react simply by buying timber planks from a nearby village.

The difference in funeral behaviour between different areas has been tested statistically. There are significantly higher outlays on coffins in the less deforested areas than in areas where almost of all forest has been cleared. Thus, it appears that cultural norms related to funerals are not static, but subject to changes as the social and physical environment changes.

6. Forest policy: more national parks?

Conservation appears not to be a high priority to the local forest administration. Daily management of national parks and reserves is under the auspices of ANGAP, a government body now delinked from the Ministry of Environment, and under the auspices of the Environmental Office (Office National pour l'Environnement (ONE)). Before the restructuring of the Ministry of Environment ANGAP reported directly to the Ministry of Environment. Now it reports and is housed in the same building as ONE. ONE is still an agency of the Ministry of Environment, but since all donor money is channelled through ONE all power is vested here. The Ministry itself has become an empty shell.

Outside the genuine conservation areas, management of the forests is the prerogative of the forest department Direction des Eaux et Forêts (DEF). DEF resisted the transfer of authority over the protected areas, formerly residing within the jurisdiction of DEF itself, to ANGAP back in 1991 (Kull, 1996). ANGAP is an institution capable of attracting huge amounts of donor aid, unlike the DEF, which struggles with low salaries and lack of motivation because the donors have decided virtually to ignore the government service apart from provision of technical assistance at the head office in the capital. The widespread issuing of non-authorized permits to transform forest into agricultural land, which we have found in the study area, can probably be attributed to individual rent-seeking by forest officers due to lack of control and the permanent budgetary constraints in the DEF. The involved amounts are considerable for both government officials (due to the sheer amount of "permits") and agricultural households (due to the considerable costs of "permits" corresponding to between 5 and 15 per cent of total income per hectare).

In the previous sections we argued that an illegal permit is regarded as equal to a deed or land title by the local farmers. There are also signs that lack of tenurial rights to forest resources is an impediment to forest conservation, but to assume that land tenure security is a sufficient condition to protect the forest is much less evident. Thus, in the remainder of the paper we will turn the focus to the newly established national park in the study area and in particular emphasise the land tenure issue, as we cannot a priori be certain that establishment of additional national parks is the best policy option for improved biodiversity conservation policies.

In 1997, the Masoala National Park (in the northeast of Madagascar) was designed with the purpose of conserving biodiversity, including explicit considerations for local development objectives (Kremen *et al.*, 1999). Earlier experiences with other park establishments in Madagascar underline the need to include local people's consent in defining the boundaries of national parks. In the case of Ranomafana National Park (east of the capital, Antananarivo), development-conservation conflicts escalated after its creation in 1991, presumably because local people were not consulted during the establishment phase. Thus, it would seem that freely flowing information and availability of incentives are important matters in future endeavours to create national parks in Madagascar (Peters, 1999).

As the Zombitse National Park is located within the present study area, we will primarily focus on this area. Zombitse is the latest attempt to protect what is left of the dry, spiny forests of SWM. The boundaries of the new Zombitse National Park can be clearly distinguished from the surrounding area. Here, grassland has replaced the

deciduous forests, and land is used only for cattle grazing. Within a couple of meters, high trees and dense forest cover change into bare grassland. This suggests an efficient management of the national park itself, but also a high pressure on the surrounding area from the local population. According to Rakotoniana and Durbin (1998), the WWF involvement in establishing the national park has enabled the deforestation rate around the national park to diminish to zero over a period of ten years (1988-1997). One of the reasons for this supposed success in halting the deforestation process, it is argued, has been the provision of tenurial security to migrants who cleared land for agricultural purposes in the past even though it was illegal. By this decree, former migrants should then become permanent inhabitants ("autochtones") and, if the assumption stands, would refrain from further encroachment on the forest. Other important factors are the legal sanctions taken against illegal hunting and a FAO funded credit scheme applied to already existing farmland.

Is it really the provision of tenurial security, which has made the difference? WWF's success in reducing loss of forest cover in the vicinity of Zombitse National Park might be more linked to the establishment of a monitoring and sanctioning system than with the tenurial security. The fine for trespassing is 50,000 FMG and illegal hunting is 250,000 FMG (Rakotoniana and Durbin, 1998). According to Ostrom (1999, p. 7), graduated sanctions (users violating operational rules will receive graduated sanctions) are one of the basic principles in long-term, common-pool resource management. Moreover, rules must exist that stipulate who has rights to forest resources; they should be considered legitimate and fair; monitoring should take place and be accountable to the users; and sanctions should be graduated (Ostrom, 1999, p. 7). These conditions are met in the case of Zombitse, but not generally in the National Parks of Madagascar. However, even in the case of Zombitse there is a risk of the conditions falling out once the WWF management of the park is brought to an end.

Other places in Madagascar have not been subject to similar studies in-and outside national parks, so at this stage a generalisation of conservation prospects in Madagascar is not feasible. Research into deforestation problems from other sites of Madagascar, however, indicates similar characteristics. Forests outside the national parks are very difficult to protect, even when the slash-and burn agricultural practises are less economical than cropping on permanent fields (Messerli, 2000 – comparing rice production with banana plants). National parks including Zombitse will be difficult to manage in the long run without efforts to address the deforestation issues outside the parks. If not, pressure on parks will persist.

Local participation in conservation is as much a political process as national government participation and actions will never be financially sustainable in the absence of good alternatives. Though not entirely comparable, the establishment of another nature reserve (not equivalent to a national park) in the vicinity of the provincial capital Toliara, Beza Mehafaly, illustrates the difficulties encountered in conservation actions. Beza Mehafaly is located 100 km South of Toliara – the zone of study lies West of Toliara. Rehabilitation of a road to farmers was one of the most expensive compensation components, but also one of the most appreciated by the villagers. One study concluded that without the support of the local politicians at district and village level, there would have been no project. With their support alone – i.e. without economic compensation – the reserve is unlikely to have succeeded in the long run (Richard and Dewar, 2001).

7. Conclusion: is conservation possible?

Our results indicate that very few incentives and opportunities for forest conservation are presently available to local stakeholders outside the national parks. It appears that stakeholder strategies are conditioned by the following factors:

- Forest resources have various meanings and uses for the stakeholders, but it appears that the economic, direct use-value prevails in cases of mutually incompatible alternative uses.
- It appears that there are no inherent tendencies in the strategies of the different stakeholders towards long-term conservation, neither of forest resources, nor of the agricultural resource base on cleared land. Rather, the respondents of the present study demonstrate a strikingly high preference for present consumption.
- A reason for the peasants to embark on forest encroachment could be the higher degree of tenure "security" gained through land clearing than what is obtainable through relying on income from forest products, which is a more non-exclusive activity resembling an open-access situation. In this case, the rationale has more to do with the absence of legally secure land tenure framework, than linked directly with economic use-value.

It could be argued that a first-best situation would be to provide peasants with better incentives for conservation through a more secure land tenure system. However, there is no guarantee that the immediate economic benefits from land clearing will not continue to prevail in such a situation. Indeed, our results indicate that perceived tenure security is associated with more intensive farming. Thus, our study seems to suggest that the risk that deforestation will continue is real. Whether provision of tenure rights to all land, including forest, will render the peasants more conscientious about the value of forest is still an open question and a hypothesis which is difficult to test.

A second-best solution could be to impose restrictions on forest use and launch enforcement rules (sanctions). This solution imposes more direct costs on users, as the range of possible strategies are reduced, but it might be more effective in terms of short-term forest conservation. However, as the results of the present study point to, provision of adequate livelihood opportunities to the local population is imperative for the success of any long-term conservation policy. How are peasants to take the future into consideration if neither the institutional nor the economic infrastructure is available for long-term investments? At present, there is no obvious alternative to deforestation. A viable solution could be to provide improved market opportunities for sale of medical plants. This would in turn necessitate major investments in infrastructure, market outlets and means of transport from the villages.

Based on our study of farmers' strategies in SWM, it is thus dubious whether conservation of the forest is viable without any genuine protection measures. Moreover, new tenurial rights regimes are not a sufficient policy instrument for government to guarantee conservation, when other constraints like market access are not overcome.

Notes

1. Selecting option A instead of B, the discount rate of the respondent is estimated as being at least $(2,420 - 2,000)/(1,000 - 900) - 1 = 320$ per cent, or preferring option B instead of C,

the implicit discount rate can be calculated as being at least $(2,680 - 2,420)/(900 - 800) - 1 = 160$ per cent.

2. In the western and southern part of Madagascar, slash-and-burn is used to clear the forest to produce maize. Slash-and-burn agriculture is also found in the eastern part of Madagascar, where rice production in valleys is insufficient and hills are utilized (tavy).
3. However, in at least one village in the sample (Antsoha), deforestation originated from commercial exploitation in 1971 on land that was later converted into agricultural fields (using hatsaké; slash-and-burn agriculture in Malagasy). It is more likely that land use moves through a number of stages.
4. This significant difference in size of average discount rate estimate is striking, not the least since it indicates a tendency to discount the future less heavily if immediate losses are involved (this confirms that the concept of loss aversion, proposed by Kahneman and Tversky (1979) also exists in the intertemporal domain).
5. This difference in discount rates between areas was statistically significant at a 1 per cent level. Discount rates in area 1 were calculated at 112 per cent, which was not statistically different from the other areas.
6. In a biomass study in the same area (Samisoa, 1999) the value of one hectare of forest has been calculated and compared with the value of the produce from one hectare of agricultural land. The study concludes that the gathering of medical plants compares favourably with agriculture, yielding a potential of ten million FMG per hectare compared to less than one million FMG per hectare from agriculture. It is important to recognise, though, that the two figures are not directly comparable, as the calculated economic benefits of roots and medical plants indicates the optimal value of one hectare of forest or scrub as opposed to the actual value of maize crops from one hectare of land.

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A model of human behaviour for sustainability

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Abstract

Purpose – The paper aims to explicate the systematic creation of social and ecological scarcities within an absolutely monetised economy and derives the necessity to change the "rules of the game" for doing business towards sustainability. Therefore, a model of human behaviour is developed to explain, on the one hand, sustainability-hostile behaviour and to contribute to sustainability-supporting behaviour and "rules of the game" in dynamic interactions, on the other hand.

Design/methodology/approach – A model of human behaviour is developed, integrating socio-scientific insights as well as socio-biological and evolutionary-psychological findings. The emergence of human behaviour is conceptualised as an interactive process using the theory of nested control loops including constructivist impulses.

Findings – Human behaviour is regarded as the result of three constituting components: cultural shaping (cultural artefacts, education, socialization, enculturation), genetic predisposition (pattern recognition based on instincts, needs, drives, etc.), and situational correctives. These components are connected and interlinked in an "inner model" with the help of four feedback loops (constructivist feedback loop, emergency and reflex feedback loop, interaction feedback loop, and adaptation feedback loop) in the unity of eco- and psychosphere.

Research limitations/implications – The developed model of behaviour offers a relatively high degree of abstraction. Further research should consider in detail the constituting components of the model and scrutinise the underlying presumptions and conclusions.

Practical implications – Conclusions arise for designing institutional arrangements, on the one hand, and management approaches and dialogue forms for shaping work processes in the dynamic interaction of individuals and institutions (companies and their units, NGOs, financial institutions, insurance companies, public authorities, etc.), on the other hand.

Originality/value – Because of the cybernetic interlock of the three constituting impulses for human behaviour cultural factors, genetic predispositions, and situational influences, the presented model provides possibilities to explain sustainability-hostile as well as sustainability-supporting behaviour within the dynamic interaction of individuals and institutions. The target group includes social scientists and economists as well as managers and persons with practical experience in business and politics.

Keywords Individual behaviour, Economics, Sustainable development

Paper type Research paper

1. Introduction

The discussion about sustainable development arose from the account of vast ecological, economic and social problems: most of these problems resulted from the

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proliferation of the current system of production and consumption from local to the global scale. We now experience inhumane living conditions which affect large parts of the human population as an enduring outcome of this economic system. We see a persistent risk for ongoing destruction and growing inequalities between the people in the North and South. The dispute on sustainability evolved as an attempt to redirect economic mechanisms and activities towards meeting basic and specific needs of a continuously increasing number of people. The goal is to reconnect the economy to human scales. In this sense, sustainability challenges economic, social and political actors as well as the scientific community and particularly economists (Board on Sustainable Development, 1999; Kates *et al.*, 2001).

Ecological economics pioneered a new and practically relevant paradigmatic approach for this redirection. Nevertheless, most of the previous work in ecological economics has been concerned with the integration of ecological, biological and physical aspects into economic reasoning. It is only very recently that behavioural and societal aspects of sustainability have gained more attention from ecological economists (Jager *et al.*, 1999; Söderbaum, 1999; van den Bergh *et al.*, 2000; Siebenhüner, 2000a). Given the fact that economic transactions and ecological damages are mostly caused by human behaviour, it is crucial to study it in order to open up paths towards sustainability.

This paper focuses on the issue of human behaviour in relation to sustainability by addressing two sets of questions. First, why do humans adhere to rules and norms that are in the long run self-destructive? Why has the orientation towards the human scale over time lost its normative and practical strength? And, second:

- Are there practically relevant moral, ethical or legal limits (constraints) to human activities?
- Does a normative power of humanity exist?
- Are there other drivers for unsustainable development beyond egoism?

This paper attempts to provide answers to these questions in order to guide ways towards sustainability. Section 2 gives an example for the current prevailing value systems, perceptions and the destructive tendencies of the existing systems of production and consumption. This account leads to fundamental positions held in economic theories of human behaviour. In Section 3, the concept of sustainability outlines the idea of the normative force of humanitarian principles. Subsequently, in Section 4, the paper proposes a model of human behaviour that allows one to deduce practically relevant conclusions for behavioural change using a transdisciplinary theoretical background. This model of human behaviour intents to integrate both: the traditional economic approach and the isolated behavioural research that is hardly related to very concrete problems of many people's real lives. Therefore, in Section 5 the model links to sustainability, whereas Section 6 discusses the practical applications of the model. Section 7 contains major conclusions.

2. Self-destructive tendencies in the modern economy

The economy is the essential cultural system to fulfil people's needs based on division of labour and the efficient use of scarce resources. Economic decision-making allocates natural resources, financial assets, man-made capital and human labour to competing

demands basing on prevailing value structures and, over time, leads to the manifestation of rules and norms which render people's interaction more reliable, calculable and efficient. The underlying value system or consuming technologies may make resources scarce and lead to the present day constitutional economic paradigms of scarcity and efficiency.

What are today's predominant perceptions and derived value structures that in turn influence norms and rules for economic activity? The answer may be founded on the following thoughts. Increasing use of machinery and technology allowed for the increasing transformation of matter and information according to human objectives and fostered the focus on quantity rather than quality. Consequently, quantity became the predominant way of assessing natural and human progress. Based on the human desire to plan, to control, to communicate and to "understand" these processes, quantitative measurement turned into a value in itself and drove into simplified mono-causal interpretations of the world.

The only general indication systems in the economy are in this simplicity prices and corresponding quantities. Quantity and prices allow for measuring scarcity and on the same token growth or depression. As far as the economic system is concerned, the resulting value structures, therefore, focus on money. Throughout modern history, money became the universal measure for value, the predominant means of comparison as well as the basis for decision making and valuation. By and large, monetary valuation and measurement and linear mono-causal reasoning are based on the following assumptions (Cable and Cable, 1995):

- decisions based on monetary calculations lead to an effective fulfilment of human needs and to efficient allocation of scarce resources;
- egoism focused on monetary wealth results in social and individual wellbeing;
- quantitative growth in particular of monetarily measured performance is the crucial basis for wellbeing and an end of economic activity in itself; and
- the use of technologies to generate monetary profits automatically ensures well being and is the predominant way to solve human problems.

It is not only mainstream economics but also large parts of lay thinking following a system of thought building on the following:

- Everything could be purchased (thereby also humans and animals are being degraded into commodities).
- All problems could be solved by spending money or through technology which is triggered by money poured into it (money and technology embody the idea of human omnipotence, universal freedom and that all problems could be solved). Those with little money have to face less freedom and more problems.
- Egoism serves the purpose of self-actualisation. Monetary properties and power rank high in the scale of values and incentives that motivate people.
- Only those things are valuable in terms of attention, invested efforts, or general valuation that have a known relation to money such as prices or revenues.

It is more than obvious that these kinds of ideas might lead to decision-making where arguments are exclusively targeted at monetary revenues expressed in catchwords like

cost minimisation, competitiveness, positive climate for investment, stock exchange rates, globalisation. With the help of these arguments one could stop or hinder endeavours to increase the actual well being of humans such as health care, protection of nature or social networks. Moreover, measures with apparent threats to humankind and nature are being fostered, in particular with regard to large-scale technologies which jeopardise social cohesion, natural support functions, and human health. All these are constitutional parameters of systems functioning rather than structural and measurable "values" on which the present day economic system is founded.

One example for the strength of the monetarism in thought within actual decision-making processes is the opposition against a change towards the massive use of solar energy because of higher private costs for this technology and neglecting social costs of energy consumption. Considering the fact that a change towards renewable energies is inevitable in the long-term survival of humankind (Georgescu-Roegen, 1971), it becomes clear that monetary reasoning even dominates in questions of human survival. It is not that the system of monetary calculation is adapted to the substantial requirements of human survival but the monetary calculation dominates human behaviour. This relies in the omnipotent belief that reality will adhere to the directives of this calculation system.

The predominant model of human behaviour in mainstream economics, *homo economicus*, is the result of value structures and intellectual traditions. They are taken as an ingenious concept inasmuch as it simultaneously allows for the allocation of economic items, needs and scarcities on the basis of one single value measure, money. In the centre of this assumption stays self-interested behaviour and individualism (Savage, 1954; McKenzie and Tullock, 1978; Frank, 2000). These are the constitutional parameters of the present day economic model. However, this approach has been criticized for different reasons (Polanyi, 1944; Veblen, 1964; Schumacher, 1973; Etzioni, 1988). In the following, it will be discussed how far these criticisms apply for the use of the model in the context of sustainability.

2.1 Limited view of the economy

The traditional economic model of human behaviour excludes non-monetary processes but focuses exclusively on monaterism. Two examples illustrate this deficit. First, many natural goods either do not have a price at all – mostly because there is no market for them – or they are underestimated because they are measured in terms of their extraction costs rather than in their overall scarcity. Thus, the economic calculation in almost all cases leads to an overexploitation of natural resources and to severe scarcities. Therefore, we are approaching the situation of a full world in the sense of Daly (1992), where the scale of economic activities reaches the limits of the carrying capacity of the global (eco-)system.

Second, several fields of human behaviour cannot sufficiently be addressed by the traditional economic model. Subsistence work, household activities such as child-care, provision of food and recreation are mostly not part of economic reasoning since there are usually no monetary transfers connected to these activities (Ferber and Nelson, 1993; Biesecker, 1996).

2.2 Limited view of human needs

There are several approaches attempting to exceed the narrow focus on material needs and their satisfaction through economic, i.e. marketable, goods (Becker, 1976). However, the model of *homo economicus* cannot transcend its origins in market transactions. Since economists concentrate on those needs that are expressed at markets, they systematically exclude other needs that do not lead to an economic demand for a certain commodity. Therefore, the perception of human needs – traditionally addressed as preferences – primarily centres on material needs and remains oblivious to other forms of human needs, such as the need for identity, understanding, creation, or participation (Max-Neef, 1992).

2.3 Exclusion of social aspects

The *homo-economicus* model views human behaviour from a radical individual perspective and, thereby, analytically cuts off the social bonds of humans. Phenomena like altruism, communication and interpersonal care recede from the view although they are inevitable for addressing the problems of sustainability, among others intergenerational justice (Etzioni, 1988; Kohn, 1990; Manstetten and Faber, 1999).

2.4 Self-destruction

One of the most incisive objections maintains that the pursuit of unconcerned self-interest in reality turns out to be self-destructive. Institutions like markets, enterprises, families, social security systems and even democracies are being jeopardized when individuals behave completely self-interested and follow the prescriptions of *homo economicus* (Faber *et al.*, 1997). More seriously, purely self-interested behaviour does not necessarily comply with existing legislation. In other words, being conceptualised as a totally amoral individual, *homo economicus* is constantly inclined to commit a crime or to violate laws as long as economic calculus reveals it to be profitable. Thus, even the establishment of legal arrangements of public interest, such as eco-taxation, is endangered by this orientation. On the basis of personal cost-benefit calculations, criminal action such as corruption, blackmail, and even robbery could be regarded as appropriate means to achieve certain goals. Thereby, it destroys social institutions like the market. The example of current Russia shows that markets break down when criminal action is a predominant pattern of behaviour; there are hardly any incentives remaining for production and distribution (Wolosky, 2000).

2.5 Empirical counter-evidence

The functioning of social institutions in many Western countries reveals tendencies in human behaviour other than pure self-interest. Legal compliance, fairness, mutual aid, respect of personal property and dignity, and cooperative family life can be perceived as signs of altruism in humans (Kuttner, 1999). Moreover, experimental studies have demonstrated that several predictions of the traditional economic behavioural model do not comply with observable human behaviour. Instead, the test persons regularly invest more money into public assets than one would have expected on the basis of the *homo-economicus* model (Marwell and Ames, 1982). Moreover, they usually obey

norms of fairness rather than behave selfishly (Stanley and Tran, 1998; Eichenberger and Oberholzer-Gee, 1998; Gintis, 2000).

In summary, it could be argued that the traditional economic model of human behaviour as formulated in the *homo-economicus* concept has considerable shortcomings in particular with regard to the broader targets of sustainability such as inter- and intra-generational justice and preservation of fundamental environmental services and assets. By contrast, ecosystem services are becoming increasingly scarce, which causes severe deficits in the satisfaction of people's needs. Therefore, new ecological scarcities emerge. Moreover, with regard to human needs, newly upcoming social scarcities such as deficits in the satisfaction of important social needs as understanding, social embeddedness and participation cause problems on any scale. Thus, the pure *homo economicus* produces a coherent model world, but it leads to the destruction of the real world of human beings.

3. Sustainability and modelling human behaviour

There is an ongoing debate on a precise and meaningful definition of sustainability. Even in a rather open and disputable form the concept offers a guiding vision – or as it is often put, a Kantian "regulative idea" (Minsch *et al.*, 1998) – about which pathways of development could be entitled as being sustainable or not. In this paper, the conviction is held that sustainability basically is a normative concept pursuing economic, social and ecological objectives and simultaneously ensuring human survival and a good, free and meaningful life for today's and for future generations (WCED, 1987; van den Bergh and van der Straaten, 1994; Munasinghe and Shearer, 1995; Clayton and Radcliffe, 1996).

The need for sustainability results from the global ecological and social conflicts emanating from the current economic system and its underlying value structures. To resolve these conflicts a broad communication process in society targeting at the redirection of the economic systems' rules and norms towards humanitarian objectives is required. Therefore, numerous authors call for an open dialogue between all individuals and groups that are affected by these problems (Habermas, 1983; O'Hara, 1996). Sustainability provides the unique and probably the ultimate opportunity to re-organize human co-existence according to the human scale.

The pathways to achieve the general targets of sustainability include:

- socially and ecologically compatible innovations (Rennings, 2000);
- preservation of natural resources that are critically important for human life (Prugh, 1995);
- avoidance of irreversible degradation of soil and landscapes and of irreversible manipulations of the human genetic code (Faber and Proops, 1998);
- preservation of biodiversity, including diversity of behavioural and cultural patterns (Tacconi and Bennett, 1995; Gowdy and McDaniel, 1995); and
- limiting quantitative economic growth and individual resource use in favour of the notion of increasing people's quality of life while decreasing material and energy consumption (Hansen and Schrader, 1997; Sachs *et al.*, 1998; Røpke, 1999).

Therefore, it can hardly be denied that sustainable development requires substantial changes at the level of individual human behaviour. This applies especially to people in industrialized countries. Thus, Werner (1999) remarks: "Sustainability will not be achieved until humans accept more responsibility for the environmental consequences of their reproductive and consumptive behaviours". Therefore, constructive insights can be found in several sources, which address the identification, the explanation and possible intervention methods of patterns of sustainable behaviour. Especially in psychology, these issues have been extensively discussed with a focus on pro-environmental behaviour (Gardner and Stern, 1996; Winter, 1996; Howard, 1997; Homburg and Matthies, 1998). However, the broader focus on sustainability and related behavioural issues has hardly been employed in this kind of research (for the few exceptions see Doob, 1995; Werner, 1999; Zabel, 1999; Maiteny, 2000). Whereas research on pro-environmental behaviour primarily concentrates on the preservation of natural assets, research on behavioural aspects of sustainability additionally has to include other aspects of human behaviour which are relevant to sustainable development, like the following:

- individual and social learning on a cognitive and emotional level to understand and increase the awareness of environmental and social problems;
- trust in, communication, and cooperation with other people in collective action to solve environmental and social problems;
- deliberation, participation and self-organization in order to gain political influence;
- altruism especially in regard to future generations and to underprivileged people;
- satisfaction of all kinds of human needs, especially immaterial ones; and
- strengthening the emotional bonds to nature.

Even though the idea of sustainable behaviour is as hard to define as the general notion of sustainability, scientific approaches are called for in order to understand the dynamics of these patterns of behaviour and to strengthen them. Therefore, a model-based approach could be helpful inasmuch it provides an effective means to identify ways to encourage and empower people to behave more in line with the general requirements of sustainable development.

The model as it will be proposed in the subsequent section provides a rather consistent view of human behaviour in order to allow for meaningful insights on an analytical and on a practical or applied level. On the analytical level, the model should help to answer the following questions:

(1) How do destructive behavioural patterns emerge that foster non-sustainable behaviour such as egoism, alienation and the exploitation of natural capital and how do they reproduce within modern societies?

(2) Which fundamental motivations and drivers do support behaviour that is more sustainable?

(3) How do self-interested and altruistic orientations interact in particular in human action?

With regard to *practical application*, the model pictures guiding patterns for sustainable behaviour and shows how they could be encouraged. Therefore, we ask the following questions:

(4) How do behaviours emerge that deviate from mainstream egoistic patterns and how can behavioural changes be directed towards sustainable behaviour?

(5) Which organizational principles foster sustainable behaviour and how can social, political and economic institutions promote these changes?

(6) Which conclusions could be drawn for policy to support sustainable behaviour?

Given the complexity and dynamics of ecosystems and their interaction with social systems, one has to consider the methodological limitations of any model that addresses these or any interactions. A comprehensive model has to deal with a high degree of uncertainty and indeterminacy. It only can indicate how pathways to sustainability possibly evolve, acknowledging that even the broader targets are not known yet.

4. Modelling human behaviour for sustainability

Models are abstract representations of real processes. They simplify and build on certain basic assumptions. They focus on certain processes, relationships, interactions, or entities. Models that address issues of human behaviour are generally in jeopardy of oversimplifying reality. The real world is often extremely interactive, reflexive and dynamic. Based on these general insights, this model starts out with the following general assumptions.

Firstly, the model integrates current findings in psychology concerning human behaviour. The theory of planned behaviour[1] provides a fairly solid psychological background because of its broadly examined empirical foundation (Fishbein and Ajzen, 1975; Ajzen and Madden, 1986; Ajzen, 1988, 1996). However, the theory faces considerable limitations concerning the sources of individual intentions. Therefore, other approaches are taken on board as well as addressing origins of individual behaviour.

Secondly, evolutionary psychology aims at explaining the primary origins of human behaviour. This approach brings together knowledge from evolutionary biology and modern psychology (Barkow *et al.*, 1992; Wright, 1994; Allman, 1994; Ridley, 1996; Siebenhüner, 2000b). Evolutionary psychology assumes that humans' genetic predisposition is somehow directed towards life supporting behaviour – at least under Palaeolithic conditions. There is considerable evidence for the hypothesis that cooperation and a mix of altruism and egoism have been fundamental principles of human interaction in the turn of the evolution (Gardner and Stern, 1996). Nevertheless, the knowledge of human genetic predispositions cannot sufficiently explain how and why humans behave in certain ways under certain circumstances. Genetic predispositions provide rather rough patterns of behaviour than exact prescriptions in a specific situation.

Therefore, thirdly, cultural influences and situative factors will be included in the model (Kohn, 1990). Cultural factors serve as another set of reference points. Individual human development is affected through values, norms, habits, language, modes of communication, symbols, and living environments. These factors gain influence on

individuals during the period of their childhood and remain influential during their whole life (Maiteny, 2000). Consequently, actual human behaviour is seen a result of the interaction of genetic predispositions, environmental influences, cultural factors and situational necessities. These parameters constitute the model.

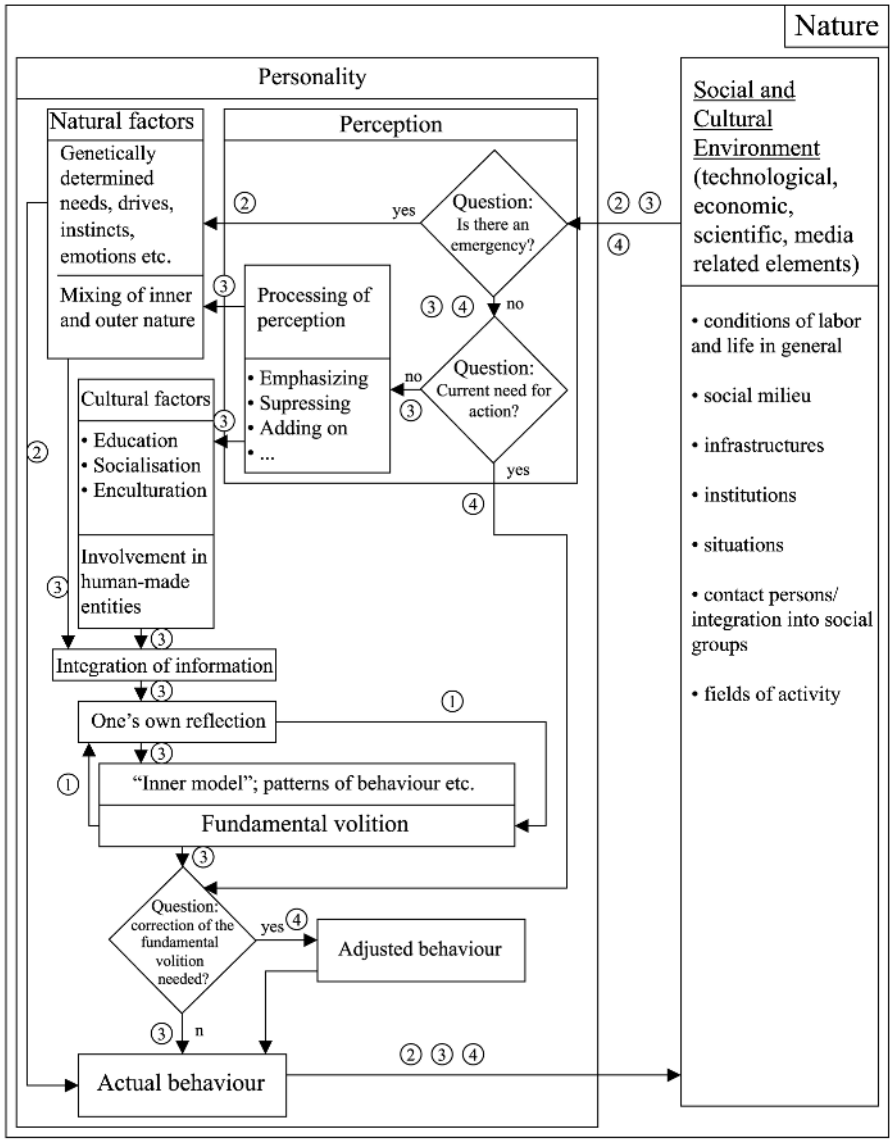
Fourth, according to cybernetics, human behaviour can be conceptualised as an interactive process organised in feedback loops with different interlinked control circuits. The model regards behaviour not as a linear process like the theory of planned behaviour does. It views behaviour as an interactive process that has repercussions on the individual and the situation in which she or he acts as well. Humans are part of the larger natural cycles. They are, therefore, subject to control circuits that govern their physical existence based on nourishment, shelter, temperatures. Even social interaction bases on control circuits that influence human behaviour.

As shown in Figure 1, the model itself focuses on an individual person, who interacts with a larger social and cultural environment embedded in the overarching natural systems. The social and cultural environment encompasses other people, values, ideas, theories, as well as science, technological devices, buildings, and material goods. They all influence the individual and its behaviour. Natural systems embody for example plants, landscapes, animals, natural resources or natural life cycles. Both spheres are closely connected: most landscapes are shaped by humans; technologies rely on natural resources; and many people regard themselves as related to nature in general. Social, cultural and natural environments are perceived by the individual person, essentially biased through various lenses.

Basically, human behaviour is determined by natural, cultural and situational impulses. According to the theory of planned behaviour, internal determinants have to be taken into account as well. The theory states that intentions play a fundamental role in the initiation of observable behaviour. Intentions, however, are seen to be determined by subjective norms (e.g. values, rules of conduct, habits, role expectations) and personal attitudes (e.g. personal desires, wants, strategies) (Ajzen, 1988, 1996). Therefore, the theory reflects very profoundly on the cultural factors as well as on the individual attitudes and beliefs that influence the conduct of human behaviour, but it hardly explores the formation of these attitudes from an evolutionary perspective, which is added in the model presented here.

It is generally assumed that human genetic predisposition embodies emotional programs and patterns of socialization that are directed towards life supporting behaviour. Following the general assumptions mentioned above, these predispositions are directed towards individual and social fitness in physical as well as in mental terms – at least under prehistoric conditions.

During their individual development, humans undoubtedly are culturally influenced by perceiving and reflecting on man-made artefacts be they material (goods, technologies, buildings) or immaterial (ideas, institutions, values). Each person integrates these elements of human culture in one way or another into his or her ego and expectations, attitudes, and perceptions. Cultural influences continuously influence the individual throughout his/her personal development from early parental care to socialization in kindergartens and schools and to their vocational or professional qualification.



Key:

① Constructivist feedback loop
② Emergency and reflex feedback loop
③ Interaction feedback loop (communication, cooperation, learning etc.)
④ Adaptation feedback loop

Figure 1.
Model of human behaviour

In the model, it is assumed that genetic and cultural information is integrated in an internal reflection process which leads to the development of a so-called "inner model" of the world. This inner model incorporates individual values, attitudes, and perceptions of the self and the world outside the individual. It is the result of a person's life-long interaction with the social and natural environment. In this process, the individual integrates social norms into his or her personality and perpetuates social value systems (Deci and Ryan, 1985). The inner model can be seen as a cluster of factors that are combined here for the purposes of the model considered, but which are usually separated in several other behavioural models such as in the theory of planned behaviour. Due to the specific quality of genetic dispositions, it is important to notice that the inner model includes sub-conscious elements the individual might not be fully aware of.

Although learning and adaptation contribute to form and specify the inner model, in the long run it can be assumed to be highly stable with most people. Only deeply moving or shocking experiences have the potential of fundamentally changing this model (Maiteny, 2000). This assumption goes along with common psychological concepts, where attitudes are defined as relatively stable dispositions to evaluate a certain object, person or action (Fishbein and Ajzen, 1975; Ajzen, 1988).

A person's fundamental volition is formed on the basis of his or her inner model. It consists of all the plans, ideas and visions a person is willing to realize within his or her behaviour. Thereby it is understood as the link between the largely unspecific perceptions and attitudes of the inner model and the intentions. The fundamental volition is specified in the sense that it is generally directed to an object, a person or an event, which is evaluated in a positive or negative way.

In this model, the process of human behaviour is conceptualised through a hierarchy of nested and interlinked feedback-loops:

(1) *Constructivist feedback-loop.* Through partial separation from the environment, the individual creates and reconstructs an inner model of the world based on subjective reflection processes (Maturana and Varela, 1987).

(2) *Emergency and reflex feedback-loop.* Incoming external impulses and information is being checked by the person whether the situation necessitates genetically disposed patterns of short-cut reactions such as life-threatening events or threats to essential social relationships. In case these patterns are activated, a sub-conscious process of internal reactions is being triggered such as stimulation of the immune defence system, hormone production, regulation of body temperatures and changes in the body's metabolism. In theses cases emergency programs trigger reactions of flight or attack or the search for new alternatives.

(3) *Interaction feedback-loop.* In the interaction with the social as well as with the natural environment, sequences of stimuli and responses are being performed in which external stimuli are being processed using genetic and cultural dispositions and on the basis of conscious reflection. In the end, a fundamental volition is being formed by the individual. This fundamental volition embodies the subjectivity of the personality, the substance of visions and ambitions as well as the corresponding values. It also includes behavioural strategies which

are conditioned by experiences and learning processes and which are highly stable within strong personalities.

(4) *Adaptation feedback-loop*. Reflecting about the given situation, the person performs adapts (?) to it in order to fulfil his or her basic needs, even if their satisfaction stands against values and norms ingrained in the fundamental volition. Typical examples are economic pressures which force people to act against their inner convictions which might be directed towards avoiding traffic, being absent from the family or behaving egoistically in order to keep one's job. Another set of examples are momentary temptations which might stand against long-term interests and orientations of the fundamental volition.

The interaction of these feedback-loops allows the individual to switch behaviours from emergency reactions towards concrete given situations to long-term strategy formation and implementation along the lines of personal visions.

Human behaviour encompasses learning processes on several levels. Firstly, on the level of genetic predispositions, human behaviour follows patterns of adaptation to natural living conditions in the past. Secondly, on the level of the individual personality, learning takes place within groups, cultures, religions and social and physical environments in general. In this process, the individual follows the interaction between the social environment and his or her individual strategies. Thirdly, individuals learn in given situations, mostly in a trial and error mode.

5. How is the model related to issues of sustainability?

The model starts out from a rather general perception of human behaviour. Next, we apply it to issues of sustainability. Thereby, we will address the questions posed above concerning aspects of analytical explanation and practical application.

Firstly, the model helps to explain why and how the current scientific and economic paradigm bases on self-interest, material consumption and the exploitation of natural resources and its perpetuation. As put forward by numerous sociological approaches (e.g. Giddens, 1984; Baudrillard, 1998; Carruthers and Babb, 2000), the feedback loop between the existing cultural structures and norms, the situation and personal (adaptive) reactions is seen as an important transmission mechanism to support self-interested behaviour through social pressure, situational forces and the rewards given for this kind of behaviour. Since these factors enforce themselves in an interactive network, cultural norms and values are highly stable. In people's professional life, for example, these external forces are imposed by time regimes, delegation of tasks, hierarchies and others; in social life, they transmit through laws, social norms, infrastructure, and other living conditions. Technological facilities mediate these forces and encounter or even suppress those genetic predispositions opposing these types of behaviour. By contrast, small groups, families or local communities based on voluntary participation mostly foster altruism in individual behaviour. In larger groups or within the society as a whole, individuals tend to be separated from their social networks and exhibit less altruism. Here, the predominant value systems are still oriented towards "having" rather than "being" in the sense of Fromm (1976). "Having" means, people long for material wealth and power whereas

"being" focuses on personal, mental and physical development and meaningful social relations.

Secondly, it is fundamental that humans share genetic predispositions, which incorporate orientations towards altruism and the protection of nature. Both are inevitable for realizing sustainable development. Although there is an ongoing debate on the existence and extent of altruism in human behaviour, numerous concepts have provided considerable arguments for this position (Trivers, 1971; Axelrod, 1984; Wilson, 1975, 1984; Simon, 1990). A question remains: to which extent do humans develop their potential for altruism in their actual behaviour, which depends on situational factors as well as on the cultural influences a person (experienced).

Thirdly, the model has to explain how self-interested and altruistic behavioural patterns interact. It is a strength of the model that it incorporates a long-term perspective on human development and human behaviour. Thus, it explains why self-interested behaviour has spread despite contrary genetic predispositions.

Individual development is a multi-stage process of learning and adaptation, where genetic and cultural impulses interact and help generate the inner model of the world. The inner model stabilizes the individual's behaviour since it provides relatively constant attitudes and perceptions. In a culture with a prevailing self-interest orientation, most people's inner models include this inclination although they preserve patterns of philanthropy and altruism towards their closer fellows. Nevertheless, a precise description of the interaction of genetic and cultural influences on human behaviour is dependent on further research.

6. Aspects of practical application of the model

When addressing issues of practical application of the model, it is worth asking what can be done to encourage people to behave sustainably. To answer this question, we first consider what the model offers for the emergence of alternative behavioural patterns that contrast the mainstream of cultural and economic development.

A person's value system is part of the inner model and usually develops through the interaction with other people. Impulses from the social environment such as role expectations, public pressure or group cohesion, but also upbringing and education are crucial for these values chosen by the individual. Many of the existing societal institutions, hierarchies and reward systems promote self-interested behaviour and hamper changes in individual value systems towards sustainability since they provide advantages for those individuals that behave according to the prevailing values.

Adaptation and socialization mostly conserve existing norms and values, but under certain conditions they could also lead to the development of deviant values and attitudes. It is plausibly assumed that individuals habitually carry out "implicit tests" of certain values regarding their potential dangers for their individual or collective survival. Findings about possible threats could lead to a reorientation of the personal value system. In this line of thought, the established culture of resource-intense production and consumption patterns is likely to change when limited catastrophes induce societal learning processes. But even less dramatic small-scale changes in the interaction between individual values and their outcomes can result in a severe destabilization of existing value systems – as chaos theory affirms (Kiel and Elliott, 1996). When the inner model does not serve to be appropriate for certain environmental

conditions, it might change rapidly. Consequently, since people usually stick to certain social structures and cultures as long as they regard them to be successful, changes require a consciousness of failure of the existing system. When people feel threatened, e.g. by nuclear power plants and their leftovers, they will start to criticize and to change it or themselves too.

Moreover, cooperative and altruistic values are likely to be established within a process of fair and just interaction with other people. In the process of their individual development many people experience social values that are based on empathy, altruism and cooperation. They could be integrated in the inner model and the individual values and attitudes in a long-term process of learning and education. Therefore, fostering these kinds of values becomes an enormous task for all involved in child-care, education, and training.

Changes in individual value systems can hardly be regulated from outside. Since it is the individual person who finally decides about his or her behaviour, external impulses can only lead to stable behavioural changes when they are integrated into intrinsic values. In the short run, extrinsic rewards or pressures can induce certain kinds of behaviour, but people usually refrain from continuing these activities when the external impulse is gone (Lepper and Greene, 1978; Deci and Ryan, 1985).

Concerning the question of organizational principles that make sustainable behaviour more attractive to people, the model puts forward the notion of liberalizing individuals from binding external pressures in order to encourage their moral and social potentials. Given the inherent potential for altruism, cooperation and care, the predominant strategy to activate this potential is to encourage and to help individuals to become more autonomous in their decision making and in the resulting behaviour (May, 1998).

Therefore, self-organization is a proper organizational principle to avoid authoritative and constraining social structures. But humans' intrinsic potential of self-organization is only activated when extrinsic pressures and forces decrease (Andersen, 1998; Kieser and Kubicek, 1992). Therefore, the following measures could be proposed:

- participation in decision-making processes relevant to people's personal life;
- people's autonomous decision about working hours;
- increasing people's control over and responsibility for the results of one's own work; and
- support for people's decision-making capabilities (through training and provision of relevant information).

Within the process of the formation of new value systems, small minorities are highly important since these small groups serve as the nuclei of social learning and reorientation processes. In small groups certain lifestyles can be tested with little risk. Therefore, tolerance especially towards minorities and social experiments is a fundamental principle on the pathway to sustainability.

Moreover, the model builds on a notion of human bonds with nature – Biophilia-hypothesis. Measures should be identified that guide this motivational potential towards behavioural patterns that seem to be more sustainable than the

current ones. First, it is obvious that opportunities to encounter nature in one way or the other could bolster these bonds and make people feel a part of nature, on which they depend. These opportunities could not only be provided or searched after in leisure activities but also in working conditions. For example, in management studies the introduction of ecologically compatible product designs increases the workers' satisfaction (Wehrmeyer, 1996).

7. Conclusions

The model may support private companies, public authorities, local and regional councils, sub-national and national governments as well as international organizations that try to establish new structures to enhance sustainable behaviour on the individual level. These efforts aim at constructing a network of interaction among institutions and individuals that commit to the general ideas of sustainable development and the advancement of sustainable patterns of individual and collective behaviour. This network may provide a chance to have some bearing on individual behaviour through cultural and situational influences. Adequate framework conditions at the local, regional, national and international level are necessary to change values and individual behaviour.

The establishment of a sustainability-oriented interaction network will only succeed if the relevant social and individual actors contribute. Government, official authorities, employers, managers, employees, consumers, the media, political parties, and other non-governmental organizations (such as environmental organizations, consumer protection associations and local action groups) are invited to processes of social interaction and learning. Fields of action are: legal regulation, education, infrastructure, support for cultural activities, nature conservation, public participation and deliberation, prevention of risks, open access to information and others. By the same token, incentives for unsustainable behaviour, such as high profits for exploiting activities, need to be removed. Moreover, there is a need to overcome obstacles for sustainability such as lack of knowledge about future results of current action, technological and economic constraints, and the fear of lost social prestige.

Note

1. The theory of planned behaviour is a modified version of the theory of reasoned action (Fishbein and Ajzen, 1975), which additionally takes into consideration a factor called "perceived behavioural control". This factor includes the reflection on past experience about the results of certain behaviours as well as the anticipation of future obstacles and opportunities (Ajzen, 1988; Chang, 1998).

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Erratum

In *International Journal of Social Economics*, Volume 32 Issue 1/2, it is regrettable that four small errors were included in the article "Major issues relating to end-of-life care: ethical, legal and medical from a historical perspective", by Robert F. Rizzo. The errors were as follows:

- On p. 40, the fifth line of the second full paragraph should read: "... never expressed mature views or *have* no family..."
- On p. 51, the second line of the first full paragraph should read "... as *long as* the state cannot prove a substantial..."
- On p. 51, the sixth line of the same paragraph should read "... Perhaps it would be better to address the *broader* issues of..."
- On p. 55, the tenth line of the second full paragraph should read "... One benefit would cover the cost *of one* session of..."

Simon Linacre
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