

## CHAPTER TWO

# KNOWLEDGE AND THE CONDUCT OF SOCIAL RELATIONS

Today, a general concern for the environment is expressed across the political spectrum. Nature politics is marked not so much by a division between those who oppose and those who promote environmental policies as between the various ideas and perspectives, two of which have been identified in the previous chapter, on how to deal with the problem and the politics of environmental degradation. This chapter seeks to clarify the role knowledge plays in establishing environmentalism as the version which determines the conduct and outcome of green politics. I begin by introducing Gurvitch's sociology of knowledge which provides the perspective this thesis will adopt on social phenomena in order to make the knowledge component in social relations visible, namely it will perceive these as *social frameworks of knowledge*, consisting of a social structure and a correlating knowledge system. At this point I will also clarify my understanding of science and the relationship between scientific knowledge and technology by drawing on Fuller's work. I then introduce Lakatos's concept of *research programmes* to explore how social frameworks maintain continuity over time despite the challenges they face from their external environment. Here, I make use of the insights provided by Foucault to clarify the connection between knowledge, power and domination in social relations. From this

discussion, a clearer understanding will emerge of the role of knowledge in status quo-maintenance as well as in instigating social change.

## 2.1. Social Frameworks of Knowledge

### 2.1.1. Knowledge Hierarchies

Gurvitch advocates the viewing of *all* social phenomena, be it societies or the smaller entities that make up these societies such as groups or social classes in their *totality*, that is as consisting of a social structure *and* a correlating knowledge system. Gurvitch defines the sociology of knowledge as

the study of functional correlations which can be established between the different types, the differently emphasized forms within these types, the different systems (hierarchies of these types) of knowledge, and, on the other hand, the social frameworks, such as global societies, social classes, particular groupings, and various manifestations of sociality (microsocial elements).<sup>1</sup>

Contrary to others approaches, Gurvitch documents the variety of knowledges without seeking to judge, validate or prioritise any one knowledge system, or even any type or form of knowledge, over another. In fact he clearly denies that his sociology of knowledge makes epistemological claims:

[T]he sociology of knowledge cannot serve to invalidate false knowledge, ‘demystify’ it, or ‘disalienate’ it, as Marx wanted to do. First, it is not its function to decide on the veracity of the content of knowledge, for it does not claim to take the place of epistemology; secondly, the ‘disalienation’ of knowledge, understood as the freeing of all ties between knowledge and social framework, even if it is projected as something possible only in the future, can represent

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<sup>1</sup> Georges Gurvitch, *The Social Frameworks of Knowledge*, translated by Margaret A. Thompson and Kenneth A. Thompson (New York: Harper Torchbooks, 1972), pp.16/17. Emphasis in the original.

for the sociologist *only an intellectual utopia of disincarnate knowledge.*<sup>2</sup>

Gurvitch also questions those commonly held assumptions that link knowledge exclusively to science or philosophy. Moreover, he argues for the sociology of knowledge to “give up the scientific and philosophical prejudice that all knowledge is dependent on philosophical and scientific knowledge,” and instead to “concentrate its efforts on the types of knowledge which are most deeply involved in social reality and the network of its structures”.<sup>3</sup> These are the perceptual knowledge of the external world; knowledge of the Other and the We; common sense knowledge; technical knowledge; and political knowledge.<sup>4</sup> In addition to these types of knowledge, Gurvitch differentiates between various forms of knowledge, expressed in five dichotomies:

1. Mystical knowledge and rational knowledge
2. Empirical knowledge and conceptual knowledge
3. Positive knowledge and speculative knowledge
4. Symbolic knowledge and concrete knowledge
5. Collective knowledge and individual knowledge.<sup>5</sup>

These types and forms of knowledge differ in emphasis with the social framework under consideration. In the two green ideal types outlined in chapter one we find that scientific knowledge is highly regarded in the environmental model but plays a minor role in the ecological social framework. The ecological model, by contrast, values common sense knowledge, that is a knowledge of everyday life which “tends to favour traditional knowledge, that of older and experienced people, and *savoir vivre*,

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<sup>2</sup> Ibid., pp.12/13. Emphasis in the original.

<sup>3</sup> Ibid., p.13.

<sup>4</sup> Ibid., chapter four.

<sup>5</sup> Ibid., p.37.

which neither children, nor more generally, the younger generations possess.”<sup>6</sup> Traditional knowledge, by contrast, is less relevant in modern societies where individuals are under constant pressure to adapt to the latest fashion, innovation and to the rapidly transforming environment.

Furthermore, these types and forms of knowledge also differ in character with the social framework under consideration. While an ecological *perceptual knowledge of the external world* knows the Earth as a living being, a modern scientific approach sees it as dead and inert. Both, however, are conceptual forms of knowledge. Ecologists know the Earth as a mother and a living organism; modernists perceive it as a machine or a spaceship. An ecological *knowledge of the Other and the We* perceives Nature as part of the We; it sees humans as part of Nature. A ‘modern’ approach, on the other hand, knows Nature as the ‘Other’ and sees the human species at the top of creation. And while an ecological *technical knowledge* develops low key, simple, durable and energy conservative technologies, ‘modern’ technology is high-tech and sophisticated. The knowledge of how to produce and fix it is held by specialist technicians. Likewise, the *political knowledge* of environmentalists differs from the political knowledge held by ecologists. Gurvitch defines political or partisan knowledge as “a very precise and realistic knowledge concerning opposing forces and the setting in which such action occurs. Political knowledge implies, therefore, clear awareness of difficulties to be overcome, and an acute sense of the action to be taken in any social situation.”<sup>7</sup> Contrary to the political setting ecologists are placed in, which is at the local community level in defence of or to improve the particular environment, environmentalists operate in the global political arena. Here, they deal

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<sup>6</sup> Ibid., pp.27/28. Emphasis in the original.

with representatives of national governments and multi-national corporations, and the difficulty they face is in gaining a voice in the making of international environmental agreements. Because it is of central importance to the conduct and outcome of Nature politics, I will consider *scientific knowledge* in more detail.

### 2.1.2. Science and Technology

Gurvitch defines scientific knowledge in positivist terms, referring to it as a type of knowledge that “tends towards disinterestedness ... openness, accumulation, organization, a balance and conjunction of the conceptual and the empirical. It springs from what are essentially constructed, operative frameworks, which are justified by the results obtained, and themselves often require experimental verification.”<sup>8</sup>

According to this understanding, scientific knowledge provides reliable knowledge of the natural world because the proper methods are applied by the practitioner during the process of its production. It is this normative orientation with its focus on scientific practices, techniques and skills that, today, takes the experimental natural sciences “as a standard against which other forms of inquiry are judged and to which they are supposed to aspire.”<sup>9</sup>

Critics have for some time now pointed to the discrepancy between this idealised account of science and its actual practice. First of all, Feyerabend, for example, argues that the rules provided by the methodologies of science are not only

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<sup>7</sup> Ibid., p.31.

<sup>8</sup> Ibid., p.33.

<sup>9</sup> Steve Fuller, *The Governance of Science: Ideology and the Future of the Open Society* (Buckingham & Philadelphia: Open University Press, 2000), p.1. See also, Steve Fuller, *Science* (Buckingham: Open University Press, 1997), chapter 3.

absent from scientific practice but are “*actually violated and ... had to be violated*”<sup>10</sup> by scientists in the process of knowledge production. And Chalmers concludes that “[t]here is just no method that enables scientific theories to be proven true or even probably true.”<sup>11</sup> In this sense, therefore, the systematic pursuit of knowledge under Permaculture, for example, is equally scientific.

Secondly, Fuller demonstrates that the standards and rules set by scientific methodologies are in fact “unfeasible given the social organization of science.”<sup>12</sup> With the scaling-up of science, experimentation has often been replaced by computer simulation, and scientists spend ever more time on entrepreneurial, managerial and accounting tasks, on publicity-seeking, record-keeping and grant application, at the expense of “‘research’ in the traditional sense of doing experiments, consulting the literature, and so forth.”<sup>13</sup> Fuller questions whether

The markets in which scientists currently conduct their business have expanded to the point of rendering obsolete the treatment of certain artefacts and skills as knowledge-bearing. Thus, descriptions of scientific activity that make reference to epistemic entities will be unreliable predictors of that activity because the course of science has come to be determined by extra-scientific factors.<sup>14</sup>

Science as it exists today, Fuller claims, “is primarily *not* a knowledge enterprise”<sup>15</sup> in the sense of critical inquiry, of ‘conjectures and refutations’<sup>16</sup>. With calls for ‘national competitiveness’ and the intrusion of market values into knowledge production on the

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<sup>10</sup> Paul Feyerabend, *Science in a Free Society* (London: NLB, 1978), p.13. Emphasis in the original. See also Paul Feyerabend, *Against Method*, third edition (London & New York: Verso, 1993).

<sup>11</sup> A. F. Chalmers, *What is This Thing Called Science? An Assessment of the Nature and Status of Science and Its Methods* (Indianapolis: Itackett Pub. Co, 1994), pp.xvi/166/169.

<sup>12</sup> Steve Fuller, *Social Epistemology* (Bloomington & Indianapolis: Indiana University Press, 1988), p.268.

<sup>13</sup> Fuller, *Governance of Science*, 2000, op. cit., note 9, pp.43.

<sup>14</sup> *Ibid.*, p.42.

<sup>15</sup> *Ibid.*, p.40. Emphasis in the original.

<sup>16</sup> See Karl Popper, *Conjectures and Refutations* (London: Routledge and Kegan Paul, 1969).

one hand, and an information explosion on the other, the incentives and possibilities for providing substantial criticism have been removed.<sup>17</sup> The method of conjectures and refutations, according to Fuller, works only in small intimate groups whose members have earned the mutual respect that enables the free flow of making and taking criticism, in groups where face-to-face interaction ensures the prompt feedback that is necessary for one to benefit from criticism.<sup>18</sup>

Critics also point to the consequences of subscribing to this idealised understanding of science. First, this conception of science allows for the social factors that affect knowledge production to be assessed “solely in terms of their ‘epistemic’ consequences, rather than in terms of their more general impacts on society, which, of course, together constitute the social conditions for subsequent knowledge production,”<sup>19</sup> because it considers scientific knowledge to be *about* rather than *in* the world, it believes knowledge to *represent* rather than *intervene* in the world.<sup>20</sup>

Secondly, an idealised understanding of science that “locates knowledge in the skills that scientists display in their workplaces”<sup>21</sup> vindicates the power that scientific disciplines exercise over non-scientists. Disciplinary specialisation, Fuller argues,

has removed an increasing number of issues from public debate to the testimony of “experts”. These disciplines exercise “power,” in the sense that all epistemically warranted opinion in their respective domains requires their certification, which, in turn, forces the warrant-seeker either to undergo the arduous training of becoming

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<sup>17</sup> Fuller, *Governance of Science*, 2000, op. cit., note 9, p.39/106.

<sup>18</sup> Steve Fuller, *Philosophy, Rhetoric, and the End of Knowledge: The Coming of Science and Technology Studies* (Madison: The University of Wisconsin Press, 1993), p.283.

<sup>19</sup> Fuller, *Governance of Science*, 2000, op. cit., note 9, p.43. As illustrated by Gurvitch, *Social Frameworks of Knowledge*, 1972, op. cit., note 1, pp.33/34.

<sup>20</sup> Fuller, *Philosophy, Rhetoric, and the End of Knowledge*, 1993, op. cit., note 18, pp.104/105.

<sup>21</sup> *Ibid.*, p.12.

such an expert or simply conserve effort and defer to the experts already in place.<sup>22</sup>

This exercise of power applies not only to knowledge claims within specific disciplines as such but extends to their application, that is to technology. Today, the notion prevails that technology is based on scientific knowledge, not because it has been proven that science is essential to technology, as Fuller explains, but because scientists exercise authority, in the sense that engineers need to earn scientific credentials in order to produce and market their products.<sup>23</sup> Today, “people have been persuaded to *presume* that the efficacy of natural scientific knowledge is behind effective technology, which then serves to *preclude* a demonstration that natural science has indeed generated the relevant effects.”<sup>24</sup>

Finally, an idealised understanding of science also conceals the fact that modern, advanced science, with its institutional features of professionalism, expertise and specialisation, does not live up to its ideological commitment of free exchange and mutual criticism. On the one hand, scientists are not held responsible for their activities beyond the borders of science, they are not accountable to the concerns raised by society at large, while on the other hand, non-scientists are excluded both from deciding over knowledge production as well as its distribution.<sup>25</sup>

Science consists of distinctive networks of disciplinary languages, shared technologies and professional forums. However, these networks function – as a matter of consequence, if not of design – so as to produce a certain distribution of power in society. In particular, science is permeable by state agencies and corporations.

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<sup>22</sup> Fuller, *Social Epistemology*, 1988, op. cit., note 12, p.11.

<sup>23</sup> Steve Fuller, ‘Knowledge as Product and Property’, in Nico Stehr and Richard Victor Ericson (eds.), *The Culture and Power of Knowledge: Inquiries into Contemporary Societies* (New York: Walter de Gruyter, 1992), pp.171-173. See also Fuller, *Philosophy, Rhetoric, and the End of Knowledge*, 1993, op. cit., note 18, chapter 7.

<sup>24</sup> Fuller, *Philosophy, Rhetoric, and the End of Knowledge*, 1993, op. cit., note 18, p.111.

<sup>25</sup> Fuller, *Governance of Science*, 2000, op. cit., note 9, p.31.

They can make a strategic difference to the direction that the knowledge enterprise takes by adding or withholding support. This, in turn, serves to enhance the power of these institutions at the expense of other groups in society. By contrast, ordinary citizens, who are typically on the receiving end of a 'knowledge transfer' encounter science as a *fait accompli* over which they exert control only in determining the 'applicability' of a particular scientific product to the place where they live. And even here, the degree of control can be over estimated, since often the products of science that would most benefit people in a given locale are not made available to them, while economic and political pressure may be placed on the very same people to accept other products of science that they would normally not have any use for.<sup>26</sup>

The implications of this democratic deficit are that knowledge production "remains concentrated in the hands of the relative few ... [T]hrough education and other forms of epistemic consumption, people can peacefully participate in social transformation brought about by scientific and technical innovation,"<sup>27</sup> yet they cannot determine the direction this social transformation is going to take.

Today, some would argue that science has achieved an eminent position in our society not because it can provide us with a reliable truth of what the world is like but because "*the show has been rigged in its favour*,"<sup>28</sup> which is why we refrain from testing whether other traditions could not do much better.<sup>29</sup> With this in mind, my understanding of science is based on Fuller's conception of a *Shallow Science*. This approach "locates the authoritative character of science, not in an esoteric set of skills or a special understanding of reality, but in the appeals to its form of knowledge that

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<sup>26</sup> Ibid., p.45.

<sup>27</sup> Steve Fuller, "'Rhetoric of Science': Double the Trouble?", in Alan G. Gross and William M. Keith (eds.), *Rhetorical Hermeneutics: Invention and Interpretation in the Age of Science* (Albany: State University of New York Press, 1997), p.281.

<sup>28</sup> Feyerabend, *Science in a Free Society*, 1978, op. cit., note 10, p.102. Emphasis in the original.

<sup>29</sup> Ibid., p.106.

*others* feel they must make in order to legitimate their own activities.”<sup>30</sup> From a Shallow Science perspective, therefore, the focus will shift from *scientific* processes that enable a discovery to be made towards *social* processes, that is towards “the ability to negotiate the science-society boundary to one’s own advantage in a variety of settings.”<sup>31</sup> A Shallow Science perspective will ask who is to benefit from this outcome, who is empowered by it, and who is disenfranchised as a result.<sup>32</sup>

Secondly, the focus will shift away from establishing what counts for ‘the truth’ as such and onto the social and material transaction costs involved in knowledge production as well as onto the interests that are served by its pursuit.<sup>33</sup> From a Shallow Science perspective, therefore, the normative orientation will shift its attention away from an emphasis on *method* and on to considering the *ends* and *consequences* of a particular research programme.<sup>34</sup> What matters, from this perspective, “is what happens once science ventures forth from the laboratory.”<sup>35</sup>

Finally, Shallow Science assumes that “knowledge production should proceed only insofar as public involvement is possible,”<sup>36</sup> in other words, it supports the democratisation of scientific knowledge production and distribution. From this perspective, therefore, I assume that what ought to pass for ‘green’ science should be determined (a) by the sort of knowledge that people need to live sustainable lives and that they can produce themselves, if possible; (b) by the costs at which knowledge is produced and distributed; and (c) by the effects knowledge has on others, including

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<sup>30</sup> Fuller, *Philosophy, Rhetoric, and the End of Knowledge*, 1993, op. cit., note 18, p.xx. Emphasis in the original.

<sup>31</sup> *Ibid.*, p.12.

<sup>32</sup> Fuller, *Governance of Science*, 2000, op. cit., note 9, p.124. Fuller, *Philosophy, Rhetoric, and the End of Knowledge*, 1993, op. cit., note 18, pp. 12/13.

<sup>33</sup> Fuller, *Philosophy, Rhetoric, and the End of Knowledge*, 1993, op. cit., note 18, p. 378.

<sup>34</sup> *Ibid.*, p.xviii.

<sup>35</sup> *Ibid.*, p.380.

non-human species and Nature.<sup>37</sup> Epistemology, in this sense, is *Social Epistemology*.<sup>38</sup>

### 2.1.3. The Relationship between Micro and Macro Social Frameworks

Gurvitch identified and studied various types of social frameworks which he categorised into *forms of sociality, groups, social classes, and global societies* (Fig.5).

Forms of sociality	Groups	Social Classes	Global Societies
Masses Communities Communes	Families Small-scale local groups Factories States Churches	Peasant class Bourgeois class Proletarian class Quasi-class of techno-bureaucrats	Archaic societies Theocratic-charismatic societies Patriarchal societies City-states in the process of becoming empires Feudal societies Nascent capitalist societies Democratic-liberal Societies Managerial society of organised capitalism Fascist techno-bureaucratic society Centralised state collectivism Decentralised, pluralist collectivism

FIG. 5: Social frameworks of knowledge

Societies, or what Gurvitch calls *global societies*, are defined as “total social phenomena which are the most extensive and important, the richest in content and influence in any given social reality. They surpass in richness and authority not only

<sup>36</sup> Fuller, *Philosophy, Rhetoric, and the End of Knowledge*, 1993, op. cit., note 18, p.xviii.

the functional groups and social classes, but also their conflicting hierarchies.”<sup>39</sup> It is the knowledge system of a particular societal model, therefore, that frames the thought and practices of all its members. This relates to Foucault’s point about regimes of truth:

Each society has its regime of truth, its ‘general politics’ of truth: that is, the types of discourse which it accepts and makes function as true; the mechanisms and instances which enable one to distinguish true and false statements, the means by which each is sanctioned; the techniques and procedures accorded value in the acquisition of truth; the status of those who are charged with saying what counts as true.<sup>40</sup>

The social reality of the people living in feudal societies, for example, is different to those living in democratic-liberal states, and so is their perception of the world that surrounds them. They both live in different environments, in different social structures, with different organisations, different knowledge systems, and different sets of techniques and appliances. They both embrace a different set of assumptions, beliefs and values. They come across different problems, have different ways of dealing with these problems, and they authorise different people to find solutions to them. In other words, different societies “inhabit different worlds”<sup>41</sup>, or to use Thomas S. Kuhn’s phrase, different paradigms.<sup>42</sup> “From where they stand, the world looks

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<sup>37</sup> See also [www.warwick.ac.uk/~sysdt/socialepist.html](http://www.warwick.ac.uk/~sysdt/socialepist.html).

<sup>38</sup> See for example, Fuller, *Social Epistemology*, 1988, op. cit., note 12.

<sup>39</sup> Gurvitch, *Social Frameworks of Knowledge*, 1972, op. cit., note 1, p.117.

<sup>40</sup> Michel Foucault, *Power/Knowledge: Selected Interviews and Other Writings 1972-1977*, edited by Colin Gordon, translated by Colin Gordon, Leo Marshall, John Mepham, Kate Soper (New York and London: Harvester Wheatsheaf, 1980), p.131.

<sup>41</sup> Stephen Cotgrove, *Catastrophe or Cornucopia: The Environment, Politics and the Future* (Chichester: John Wiley & Sons, 1982), p.34.

<sup>42</sup> Thomas S. Kuhn, *The Structure of Scientific Revolutions*, second edition (Chicago: University of Chicago Press, 1970).

different. What is rational and reasonable from one perspective is irrational from another.”<sup>43</sup>

Environmentalists and ecologists, too, live in different worlds. The social structure of an ecological societal model is characterised by human scale,<sup>44</sup> decentralised structures, such as sustainable communities. In the economic sphere, the emphasis is on local economies.<sup>45</sup> The aim is to produce and consume locally and to develop local food economies, farmers markets, and LETS schemes. LETS schemes bring local people together.<sup>46</sup> Here, the needs and wants of neighbours determine the supply of goods and services. The idea is that people themselves create the unit of measurement for exchange.<sup>47</sup> The economy of modern Britain, by contrast, is a competitive *knowledge economy* where “the main source of value and competitive advantage ... is human and intellectual capital”.<sup>48</sup> Here, ‘others’ are “trading rivals”<sup>49</sup> and economic criteria such as the standard of living in terms of GDP per head, productivity, and the share of world trade in manufacturing exports and in services<sup>50</sup> are used to characterise the relationship to these.

The two societal models also have a different understanding of what the aims of education should be. Human Scale Education encourages a holistic approach

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<sup>43</sup> Cotgrove, *Catastrophe or Cornucopia*, 1982, op. cit., note 41, p.34.

<sup>44</sup> Kirkpatrick Sale, *Human Scale* (London: Secker & Warburg, 1980).

<sup>45</sup> Peter Lang, ‘Local Economies, Local Currencies, and Ethical Investment’, in Molly Scott Cato and Miriam Kennet, *Green Economics: Beyond Supply and Demand to Meeting People’s Needs* (Aberystwyth: Green Audit, 1999), pp.143-152.

<sup>46</sup> Currently, there are 303 such schemes in the UK, with some 21,800 members selling goods and services using the local currencies. See Colin C. Williams, ‘LETS Get it Right!’, in *Permaculture Magazine*, No. 27 (2001), p.17.

<sup>47</sup> Peter Lang, *LETS Work: Rebuilding the Local Economy* (Bristol: Grover Books, 1994), pp.x/xi.

<sup>48</sup> Stephen Byers, *The Importance of People and Knowledge – Towards a New Industry Policy for the 21<sup>st</sup> Century*, Speech delivered at the London Business School, Thursday, October 21, 1999. [www.dti.gov.uk/ministers/speeches/byers210799.html](http://www.dti.gov.uk/ministers/speeches/byers210799.html).

<sup>49</sup> John Major, ‘Introduction’, Cm 2867, *Competitiveness Forging Ahead* (London: HMSO, May 1995), p.3.

<sup>50</sup> Cm 2563, *Competitiveness: Helping Business to Win* (London: HMSO, May 1994), pp.9/10/14.

to learning. Its aim is to educate children “so that they have the attitudes, skills and knowledge” to bring about a sustainable world.<sup>51</sup> Emphasis is placed on the emotional, social, moral, creative, practical and spiritual development of a child, and not just on intellectual growth. Formal education in the dominant societal model of modern Britain, by contrast, is geared towards providing knowledge that meets the criteria of potential employers. The British educational system is geared towards educating the “best qualified workforce in Europe.”<sup>52</sup> As David Blunkett argued, the synergy between education and employment policies is vital to the achievement and maintenance of economic competitiveness:

In our schools, colleges and universities and in training the unemployed and the disadvantaged, we accept our role in equipping individuals and the country with the skills and the creative, inquiring minds that will drive our economy in this new century. That is about neither purely education policy nor purely employment policy: the two are indistinguishable in this Knowledge Economy.<sup>53</sup>

Here, knowledge becomes extremely specialised, and is often linked to a specific workplace or occupation. The side effect of growing specialisation is a growing inability of individuals to perform multiple tasks. In this modern societal model, individuals depend on other specialists to provide them with the essentials to meet the most basic human needs such as food, shelter and clothing, as well as for scientists to find solutions to the environmental problem.

The identification of these competing social frameworks of knowledge is important to the study of social change because it allows us to differentiate between

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<sup>51</sup> Fiona Carnie, ‘Educating on a Human Scale’, in *Resurgence*, No. 204 (January/February 2001), pp.29/30.

<sup>52</sup> Cm 2867, *Competitiveness Forging Ahead*, 1995, op. cit., note 49, p.3.

conflicts that occur between the members of the same societal model and conflicts that occur between members of different societal models. Within each individual societal model, Gurvitch argued, there is a constant interaction between the various micro social frameworks of knowledge that make up this society and the societal model at large. The relationship between these is one of a constant dialectic:

The manifestations of sociality, groups, and social classes change their character as a function of the global societies in which they exist; inversely, global societies are modified at all levels under the influence of the changing hierarchy and orientation of the forms of sociality. There is therefore a dialectic between the partial and the global, which assumes the character of complementarity, mutual implication, polarization, or reciprocity of perspectives - a dialectic which is characteristic of the whole of social life.<sup>54</sup>

Anthony Giddens referred to this interplay as *the duality of structure*. Structure and agency are mutually dependent, which means that “the structural properties of social systems are both the medium and the outcome of the practices that constitute those systems.”<sup>55</sup>

Within a society, therefore, there is continuous change and movement. Social types exert influences upon each other, the individual upon the collective and the collective upon the individual.<sup>56</sup> The smaller entities that make up a society differ and change in accordance to the larger society they are part of. Societies, in turn, respond to internal alterations in their hierarchy and make-up. Societies, as a result,

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<sup>53</sup> David Blunkett, *Education into Employability: The role of the DfEE in the Economy*, speech delivered to the Institute of Economic Affairs, 24 January 2001, [www.dfee.gov.uk/speeches/24\\_01\\_01/03shtml](http://www.dfee.gov.uk/speeches/24_01_01/03shtml), para.4.

<sup>54</sup> Gurvitch, *Social Frameworks of Knowledge*, 1972, op. cit., note 1, p.45.

<sup>55</sup> Anthony Giddens, *Central Problems in Social Theory: Action, Structure and Contradiction in Social Analysis* (London: Macmillan Press, 1979), p.69

<sup>56</sup> Throughout this study the terms social reality, social type, social framework or societal paradigm will be used interchangeably, meaning a particular type of social framework of knowledge, consisting of a social structure and a correlating knowledge system. This could be a society, a social movement, the state, or a group such as a multinational corporation, for example.

are exposed to endless tensions and the threat of disintegration, yet they counter these pressures and maintain their equilibrium with repeated efforts of restructuration.<sup>57</sup> In this process, Gurvitch suggests, knowledge plays an important role. Social structures, he argues, “*are facilitated by the role that knowledge can play, along with other cultural products and social controls, in a structural framework*”.<sup>58</sup> Knowledge, along with cultural products and social controls, assists in ordering and regulating a societal model. Knowledge, in other words, frames and restricts the conduct and outcome of social conflicts within a particular societal model.

However, Gurvitch also recognises that the knowledge system associated with the global society is not always identical with the underlying total phenomenon and that the two could contradict or even enter into conflict with each other.<sup>59</sup> The knowledge system of the ecology movement, for example, contradicts the official environmental knowledge system as advocated by the UK Government. A study of social conflicts, therefore, needs to identify not only the issues and actors in dispute, but also the knowledge systems competing social actors subscribe to. What passes for knowledge in a society at any particular time? Is the knowledge system of a particular social actor identical with that of the society, or does it in fact present a rival system to it? Are we examining a particular social conflict that occurs between competing groups *within* the modern industrial environmental model, or within the ecological model for that matter, or are we studying a social struggle that takes place between *different* societal models and knowledge systems? A study of knowledge systems can thus unveil whether the conflict in question is over the hierarchy of social frameworks

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<sup>57</sup> Gurvitch, *Social Frameworks of Knowledge*, 1972, op. cit., note 1, p.117.

<sup>58</sup> *Ibid.*, p.17. Emphasis in the original.

<sup>59</sup> *Ibid.*, p.118.

*within* a society or whether it is *over* the actual type of society and its correlating knowledge system. If successful, the latter could result in the emergence of a new societal model.

Gurvitch recognised the importance of knowledge in the conduct of social relations without, however, clarifying the precise mechanism by which knowledge assists in the resistance or instigation of social change. In the subsequent sections I seek to clarify the dynamic behind these processes in more detail.

## 2.2. Reality-Maintenance

Lakatos developed the concept of *research programmes* to explain how theories maintain continuity over time despite the problems, challenges and irregularities they face.<sup>60</sup> The functioning of research programmes should thus give us an idea of how social realities stabilise and maintain their position in an ever-changing external environment and how they operate so as to hold the development of alternative social realities at bay.

### 2.2.1. Research Programmes

The concept of research programme (RP) refers to the mental structure or pattern according to which individual scientific communities operate and which connects their members.<sup>61</sup> Lakatos identifies three components in a RP, the *hard core*, the

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<sup>60</sup> Imre Lakatos, *The Methodology of Scientific Research Programmes*, Philosophical Papers Volume I (Cambridge: Cambridge University Press, 1978), pp.4/5,47-52. See also Chalmers, *What is This Thing Called Science?*, 1994, op. cit., note 11, pp.84-87.

<sup>61</sup> *Ibid.*, p.47.

*protective belt*, and the *heuristic*. The *hard core* refers to the principle assumptions, the defining features or characteristics of what a particular RP is all about. Every RP, therefore, has a distinct hard core which sets it apart from other RPs. It is on the basis of these hard core assumptions that members join a particular RP. The hard core of Newton's programme, for example, is made up of the three laws of dynamic and the law of gravitation. In principle, scientists have a choice; they decide whether to accept one particular set of hard core assumptions. In principle, scientists can opt for a different hard core at any time. Once a hard core is accepted, however, the scientist will live by the methodological rules set by the RP which inform the researcher "what paths of research to avoid (*negative heuristic*), and ... what paths to pursue (*positive heuristic*)."<sup>62</sup>

The negative heuristic of the programme forbids us to direct the *modus tollens* at this 'hard core'. Instead, we must use our ingenuity to articulate or even invent 'auxiliary hypotheses', which form a *protective belt* around this core, and we must redirect the *modus tollens* to *these*. It is this protective belt of auxiliary hypotheses which has to bear the brunt of tests and get adjusted and re-adjusted, or even completely replaced, to defend the thus-hardened core.<sup>63</sup>

The concept of RP thus suggests that its members are confined in the work or study they can carry out, even the thoughts they can pursue, by the rules of the RP which informs what can be studied legitimately and what type of investigation should be avoided. Once a scientist has decided on a particular hard core, the characteristic features of this hard core will be taken as given; they will not be scrutinised or examined; they will remain unchallenged. From the moment of acceptance, the hard

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<sup>62</sup> Ibid., p.47. Emphasis in the original.

<sup>63</sup> Ibid., p.48. Emphasis in the original.

core is rendered “‘irrefutable’ *by the methodological decision of its proponents*”.<sup>64</sup> The negative heuristic actively discourages the scientist from carrying out any work that is inconsistent with its hard core.<sup>65</sup> Instead, the RP instructs the researcher to find affirmations of its hard core.

Irregularities or inadequacies that occur over time will be dealt with by the protective belt. Here, the positive heuristic, “a powerful problem-solving machinery,” will “digest anomalies” and turn them “into positive evidence.”<sup>66</sup> RPs will accommodate irregularities by incorporating and constructing new and additional assumptions into their protective belt. It is the protective belt that develops and expands during the life-span of a research programme. This way, Lakatos argued, a certain continuity is preserved within a research programme and a “remarkable tenacity of scientific theories” is achieved.<sup>67</sup>

### 2.2.2. The Negative Heuristic of Social Frameworks

In ‘real’ life, too, we have the possibility to opt between different societal types or models. Not all participants were born into the eco-network they operate in today. A switch between various models, in principle, is thus possible at any time. Bronwyn Davies and Rom Harré agree that “[a]t least a possibility of notional choice is inevitably involved because there are many and contradictory discursive practices that each person could engage in.” However, “[o]nce having taken up a particular position as one’s own, a person inevitably sees the world from the vantage point of that

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<sup>64</sup> Ibid., p.48. Emphasis added.

<sup>65</sup> Ibid., p.47.

<sup>66</sup> Ibid., p.4.

<sup>67</sup> Ibid., p.4.

position and in terms of the particular images, metaphors, story lines and concepts which are made relevant within the particular discursive practice in which they are positioned.”<sup>68</sup>

Once an individual has embraced and accepted a particular societal model, life is lived according to its rules and principles, and reality is seen and known from this particular standpoint. This relates to the point Kuhn made about paradigms. A paradigm, he argued, “sets the problem to be solved”. It guides the researcher’s attention towards certain facts that fit into “the preformed and relatively inflexible box that the paradigm supplies”, while phenomena that do not seem to fit the box, phenomenon that are inconsistent with the hard core, “are often not seen at all.”<sup>69</sup> This suggests that within any type of social reality one is never absolutely free since one’s way of seeing the world is always restricted or regulated by the negative heuristic of the particular reality one participates in. From a *three-dimensional view of power*, as Steven Lukes would argue, social frameworks thus exercise a form of power that “prevent people, to whatever degree, from having grievances by shaping their perceptions, cognitions and preferences in such a way that they accept their role in the existing order of things, either because they can see or imagine no alternative to it, or because they see it as natural and unchangeable”.<sup>70</sup> Once accepted, an individual’s perceptions are shaped in such a way that his or her interests and practices conform to the hard core of the societal model they participate in. Their grievances are directed away from the hard core which they have come to accept as natural and unchangeable. Individuals are restricted or unable to perceive alternative social realities because they

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<sup>68</sup> Bronwyn Davies and Rom Harré, ‘Positioning: The Discursive Production of Selves’, in *Journal for the Theory of Social Behaviour*, Vol. 20, No. 1 (March 1990), p.46.

<sup>69</sup> Kuhn, *The Structure of Scientific Revolutions*, 1970, op. cit., note 42, p.24/27.

are discouraged from contemplating about issues that are inconsistent with the hard core assumptions of the society they participate in. As a result, continuity is maintained amongst the members of a particular social reality over time because possibilities that do not make sense from this perspective remain unexplored.

In the previous section it was established that every society has a correlating knowledge system, or regime of truth. Knowledge, in other words, is at the hard core of every societal type and as such confines its members in their pursuit of new knowledge, new ideas and new practices. The regime of truth thus sets the boundary not only for what counts as knowledge, how it is produced, and whom it authorises to make knowledge claims, but it also determines the boundaries of correlating social practices and structures. Legitimate knowledges “found, justify and provide reasons and principles” for certain ways of doing things, Foucault argued.<sup>71</sup> Certain knowledges and certain practices are authorised or sanctioned while others are disqualified and considered inappropriate. In other words, the participants of a society, via the regime of truth, are governed and govern themselves “by the production of truth”.<sup>72</sup> Individuals of a particular society know and conduct their everyday life in a way that is true, right, qualified, understood and legitimate according to the rules of the particular regime of truth they subscribe to. Individuals thus govern their own conduct by complying with these rules and by considering these as natural and unchangeable and by discarding contributions that are not voiced in the right language or discourse.

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<sup>70</sup> Steven Lukes, *Power: A Radical View* (London: Macmillan, 1974), p.24.

<sup>71</sup> Michel Foucault, ‘Questions of Method’, in Graham Burchell, Colin Gordon, Peter Miller (eds.), *The Foucault Effect: Studies in Governmentality* (London: Harvester Wheatsheaf, 1991), p.79.

<sup>72</sup> *Ibid.*, p.79.

A key component of the hard core of modern industrial societies is scientific knowledge. In accordance with the negative heuristic of modern industrial societies, its members will refrain from questioning or scrutinising science. Yet precisely because scientific knowledge has gained the status of ultimate ‘truth’ in Western societies, this negative heuristic serves to dominate and marginalise alternative social realities and their knowledge system. Peter L. Berger and Thomas Luckmann describe this process as follows:

[N]ihilation *denies* the reality of whatever phenomena or interpretations of phenomena do not fit into that universe ...  
 [D]eviant phenomena may be given a negative ontological status ...  
 The threat to the social definitions of reality is neutralized by assigning an inferior ontological status, and thereby a not-to-be-taken-seriously cognitive status, to all definitions existing outside the symbolic universe...<sup>73</sup>

For example, when Greenpeace activists tried to bring the deep-sea disposal of the Brent Spar to a halt in 1995, the proponents of deep-sea disposal assigned a not-to-be-taken-seriously status to Greenpeace, arguing Greenpeace lacked a sound scientific foundation. Shell maintained that its preference for disposal was the best *scientific* solution and that “an *emotive* Greenpeace campaign gave it a symbolic significance beyond any rational, scientific calculation of its impact.”<sup>74</sup> Similarly, *Nature*, in its editorial opinion, stated that “Shell Oil’s decision not to sink a used oil-rig at sea is a needless dereliction of rationality” and that the issue had “again exposed the shallowness of Greenpeace’s arguments on scientific issues.”<sup>75</sup> In modern industrial

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<sup>73</sup> Peter L. Berger and Thomas Luckmann, *The Social Construction of Reality* (London: Allen Lane, 1967), p.132. Emphasis in the original.

<sup>74</sup> Shell U.K. Limited, ‘Brent Spar’, in *Shell Magazine* (1995). Quoted in Marc Huxham and David Summer, ‘Emotion, Science and Rationality: The Case of the Brent Spar’, in *Environmental Value*, Vol. 8, No. 3 (August 1999), p.350. Emphasis added.

<sup>75</sup> ‘Brent Spar, Broken Spur’, in *Nature*, Vol. 375, No. 6534, 29 June 1995, p.708. Quoted in Huxham and Summer, *ibid.*, p.350.

societies, therefore, it is scientific knowledge that “exercises power: it is, literally, power that forces you to say certain things, if you are not to be disqualified not only as being wrong, but, more seriously than that, as being a charlatan.”<sup>76</sup>

Knowledge as a tool in the exercise of power thus serves to deny a voice to alternative social realities. They are marginalised and excluded, not on the basis of the impracticality of the position they hold, but on the basis of being a knowledge alternative *per se*. They are denied the status of a valuable, acceptable opposition and thus deprived of the opportunity of becoming an interlocutor in the decision-making process. E.E. Schattenschneider argued that

A conclusive way of checking the rise of conflict is simply to provide no arena for it or to create no public agency with power to do anything about it ... All forms of political organization have a bias in favor of the exploitation of some kinds of conflict and the suppression of others because *organization is the mobilization of bias*. Some issues are organized into politics while others are organized out.<sup>77</sup>

In other words, modern industrial societies organise new ideas and practices that do not conform to their hard core assumptions out of the public arena and confine “the scope of decision-making to relatively ‘safe’ issues”<sup>78</sup> that can be accommodated within their protective belt. Peter Bachrach and Morton S. Baratz call this the area of nondecision-making. A nondecision is “a decision that results in suppression or thwarting of a latent or manifest challenge to the values or interests of the decision-

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<sup>76</sup> Michel Foucault, ‘On Power’, in Lawrence D. Kritzman (ed.), *Michel Foucault: Politics, Philosophy, Culture. Interviews and Other Writings 1977-1984* (New York and London: Routledge, 1988), pp.106/107. See also Frédérique Apffel-Marglin and Stephen A. Marglin (eds.), *Decolonizing Knowledge: From Development to Dialogue* (Oxford: Clarendon Press, 1996). Frédérique Apffel-Marglin and Stephen A. Marglin (eds.), *Dominating Knowledge: Development, Culture, and Resistance* (Oxford: Clarendon Press, 1990).

<sup>77</sup> E. E. Schattenschneider, *The Semi-Sovereign People: A Realist View of Democracy in America* (New York: Holt, Rinehart and Winston, 1960), p.71. Emphasis in the original.

maker”.<sup>79</sup> Nondecision-making becomes “a means by which demands ... can be suffocated before they are even voiced; or kept covert; or killed before they gain access to the relevant decision-making arena; or, failing all these things, maimed or destroyed in the decision-implementing stage of the policy process.”<sup>80</sup> The negative heuristic of modern industrial societies renders inconvenient issues and actors that do not conform to the scientific ideal into non-issues in the decision-making processes.

### 2.2.3. The Positive Heuristic of Social Frameworks

A research programme not only serves to maintain continuity within a particular scientific community by restricting its members in terms of what they can do, say or think if they want to be part of this community. The positive heuristic also instructs the researcher to protect and strengthen the hard core. Members will develop additional assumptions in order to allow for any anomalies to be incorporated into the protective belt in such a way that they serve to reinforce the established hard core.

Societies act in a similar manner. Antonio Gramsci argued that when the existing hegemony, or “intellectual and moral leadership”,<sup>81</sup> is challenged, “[t]he traditional ruling class, which has numerous trained cadres, changes men and programmes and, with greater speed than is achieved by the subordinate classes, reabsorbs the control that was slipping from its grasp”.<sup>82</sup> Power, in this case, “forms

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<sup>78</sup> Peter Bachrach, and Morton S. Baratz, *Power and Poverty: Theory and Practice* (New York: Oxford University Press, 1970), p.6.

<sup>79</sup> *Ibid.*, p.44.

<sup>80</sup> *Ibid.*, p.44.

<sup>81</sup> Antonio Gramsci, *Selections from the Prison Notebooks* (London: Lawrence and Wishart, 1971), p.57.

<sup>82</sup> *Ibid.*, p.210.

knowledge, produces discourse”,<sup>83</sup> creates new disciplines, and constructs new meanings which will result in a modification of the protective belt. In such situations, Foucault warned, autonomous knowledges run “the risk of re-codification, re-colonisation”.<sup>84</sup> A study by David Pepper confirmed that one of the major difficulties green communes encountered was to become “absorbed into conventional society, that culture to which they have previously run counter.”<sup>85</sup>

The societal protective belt thus adapts to a new situation by incorporating challenging ideas so that they confirm existing hard core principles and assumptions. Berger and Luckmann described this mechanism of reality-maintenance in more detail:

[N]ihilism involves the more ambitious attempt to account for all deviant definitions of reality *in terms of* concepts belonging to one’s own universe ... The final goal of this procedure is to *incorporate* the deviant conceptions within one’s own universe, and thereby to liquidate them ultimately. The deviant conceptions must, therefore, be *translated* into concepts derived from one’s own universe. In this manner, the negation of one’s universe is subtly changed into an affirmation of it. The presupposition is always that the negator does not really know what he is saying. His statements become meaningful only as they are translated into more ‘correct’ terms, that is, terms deriving from the universe he negates.<sup>86</sup>

A brief review of three decades of green activism will illustrate this process. From the early 1970s onwards there was a growing concern about environmental problems caused by industrial production and consumption patterns. Issues such as the rainforest destruction, endangered species, droughts and famines, Seveso, and acid rain raised public awareness. Ecologism gained a new momentum and re-emerged

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<sup>83</sup> Foucault, *Power/Knowledge*, op. cit., note 40, p.119.

<sup>84</sup> *Ibid.*, p.86.

<sup>85</sup> David Pepper, *Communes and the Green Vision: Counterculture, Lifestyle and the New Age* (London: Green Print, 1991), p.204.

visibly on the scene, questioning the fundamental principles upon which industrial capitalism was built. Faced with this challenge the existing societal model responded by assimilating and integrating the green idea into its protective belt in such a way that it would not threaten or undermine its hard core principles. As a result of this assimilation, *environmentalism* emerged. Environmentalism took on the characteristic features of the existing societal model, that of modern industrial societies. Hajer argued that environmentalism, or what he called *ecological modernisation*<sup>87</sup> has gained prominence in OECD countries from the late 1970s/early 1980s onwards. This discourse assumes that

existing political, economic, and social institutions can internalize the care for the environment .... [It] uses the language of business and conceptualizes environmental pollution as a matter of inefficiency, while operating within the boundaries of cost-effectiveness and administrative efficiency ... [It is] ... a modernist and technocratic approach to the environment that suggests that there is a techno-institutional fix for the present problems ... It is a policy strategy that is based on a fundamental belief in progress and the problem-solving capacity of modern techniques and skills of social engineering ... There is a renewed belief in the possibility of mastery and control, drawing on modernist policy instruments such as expert systems and science.<sup>88</sup>

Modern industrial societies internalised environmentalism which was to become their particular version of how to deal with the environmental problem. Modern societies accounted for green ideas in terms of their concepts and presented the green issue as belonging to their social reality. In fact, the existing society managed to change the environmental problem into an affirmation of its mode of functioning by promoting

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<sup>86</sup> Berger and Luckmann, *Social Construction of Reality*, 1967, op. cit., note 73, p.133. Emphasis in the original.

<sup>87</sup> A concept originally introduced by Jänicke. See for example Martin Jänicke, 'Ökologische and politische Modernisierung: Umweltpolitik im Zeichen der Entzauberung des Staates', in *Österreichische Zeitschrift für Politikwissenschaft*, Vol. 21, No. 4 (1992), pp. 433-444.

the idea that a society needs to be prosperous, developed and scientifically advanced in order to respond to the environmental problem successfully. As Helena Norberg-Hodge, a director of ISEC (International Society for Ecology and Culture), experienced:

In the early or mid-1970s I met the head of futures forecasting for Shell International, and he said that when *The Limits to Growth* came out, the executive board was very alarmed. He had to go back to the drawing board and devise another scenario that encouraged growth. What he came up with was an idea that has become more and more widespread: growth per se is not the problem; we need growth - we need money - to clean up the environment!<sup>89</sup>

Furthermore, science took over the investigation into the nature and causes of the environmental problem; its power “never ceases its interrogation, its inquisition, its registration of truth: it institutionalises, professionalises and rewards its pursuit.”<sup>90</sup>

Those members of the green movement who accepted integration into the existing societal model were rewarded professionally, and environmentalism became institutionalised. Effectively, environmentalism was used to affirm the very functioning of industrialism. The “Green Industrial Revolution”<sup>91</sup> was proclaimed, investment into new green technologies such as biotechnology was promoted, and consumers were encouraged to continue to consume yet to switch to green products.

In other words, modern Western societies, when faced with the alternative reality of ecologism, responded by appropriating, colonising and assimilating the

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<sup>88</sup> Maarten A. Hajer, *The Politics of Environmental Discourse: Ecological Modernization and the Policy Process* (Oxford: Clarendon Press, 1995), pp.25/31/32/33.

<sup>89</sup> Helena Norberg-Hodge, *Moving Toward Community: From Global Dependence to Local Interdependence*, Sixteenth Annual E.F. Schumacher Lectures, Stockbridge, Massachusetts, October 1996, [www.localcurrency.org/lec-nor.html](http://www.localcurrency.org/lec-nor.html).

<sup>90</sup> Foucault, *Power/Knowledge*, 1980, op. cit., note 40, p.93.

<sup>91</sup> Stephen Byers, *The Green Industrial Revolution*, speech delivered at the Greenpeace Business Conference, London, Thursday October 5, 2000. [www.dti.gov.uk/ministers/speeches/byers051000.html](http://www.dti.gov.uk/ministers/speeches/byers051000.html).

green issue, by accounting for it in terms of the concepts belonging to its own reality, by assimilating the problem into affirmations. Environmentalism was constructed, institutionalised and its experts professionalised. Instead of opting for a different hard core, instead of re-constructing human society's relationship with Nature and making this relationship more harmonious, environmentalism became the new theme of modern societies. Furthermore, the existing society presented environmentalism as the only thinkable solution to dealing with the environmental problem. Environmentalism became the norm and the status quo was maintained.

The concept of research programmes thus allows a number of assumptions to be drawn with regard to the functioning of a society's buffering mechanisms. First of all, a society's continuity is maintained over time because its members have come to accept its key identifying features as natural, which means they adjust their thoughts and deeds accordingly so as not to challenge but to confirm and reinforce these core assumptions. Alternatives remain unexplored, are considered irrelevant, and are even dismissed as unpractical on the basis that they are inconsistent with the principle assumptions this society has accepted as being 'true'. In addition, however, a society's continuity is maintained by actively expanding its protective belt in order to incorporate any irregularities that might occur over time. New assumptions, ideas, and meanings are developed so as to confirm the existing version of reality but also to neutralise alternative definitions and meanings. Both aspects of a society's buffering mechanism, therefore, "cannot be localized in a particular institution or state apparatus"<sup>92</sup>, organisation, or group of people. As Foucault argued,

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<sup>92</sup> Michel Foucault, *Discipline and Punish: The Birth of the Prison*, translated by Alan Sheridan (London: Penguin Books, 1977), p.26.

Power is employed and exercised through a net-like organisation. And not only do individuals circulate between its threads; they are always in the position of simultaneously undergoing and exercising this power. They are not only its inert or consenting target; they are always also the elements of its articulation. In other words, individuals are the vehicles of power, not its points of application.”<sup>93</sup>

The power that is exercised to maintain the societal status quo runs through the entire society<sup>94</sup> and as members we participate in reality-maintenance by taking the knowledge that has been institutionalised at the hard core as given. By complying with the positive and negative heuristic, we maintain the continuity, contribute to the normalisation of this particular system, and assist in the disqualification of alternative knowledge systems. These insights allow me to clarify what strategies social change-oriented actors should pursue and which ones they should avoid.

## 2.3. Social Change

### 2.3.1. Evolutionary Change

In principle, there are two options available to those who seek to bring about change. First of all, these actors could participate in the existing society and try to change it by working from within its structures, organisations and knowledge system. These actors would interact with the various other social frameworks that make up this society in the hope to transform and modify the nature of its protective belt. However, in order to become accepted and to gain the status of a serious interlocutor, these actors have to accept the society's hard core assumptions and make knowledge claims in

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<sup>93</sup> Foucault, *Power/Knowledge*, 1980, op. cit., note 40, p.98.

accordance with the society's truth regime; they become *societal insiders*. Any change achieved, therefore, can only be *evolutionary* in nature precisely because core principles remain unaffected. Herbert Blumer called the actors engaged in such practices *reform movements*. Reform movements seek "to change some specific phase or limited area of the existing social order"<sup>95</sup> but accept the basic tenets, the hard core, of the prevailing social structures and operate within the existing institutional framework.

The labour movement, for example, participated in the struggle *within* industrialism. It presented "a counter-model of industrial society proffered by the workers".<sup>96</sup> The labour movement did not fight industrialisation itself, but it struggled over the form it took. Because reform movements accept a particular hard core, they live and die with the type of society they are part of.<sup>97</sup> Today, it is the environmental movement that prevails in the struggle within modern industrial societies over the form they take. As David McTaggart, co-founder and former chairman of the Greenpeace board said: "We have learned from our opponents. Those who want to oppose powerful forces must operate in the same way as they do."<sup>98</sup> Environmental groups have accepted the fundamental tenets of modern industrial societies in the hope to oppose those social frameworks that operate in an environmentally destructive manner. However, just as the labour movement, so is environmentalism a reform

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<sup>94</sup> Foucault, *Discipline and Punish*, 1977, op. cit., note 92, p.27.

<sup>95</sup> Hebert Blumer, 'Social Movements', in Barry McLaughlin (ed.), *Studies in Social Movements: A Social Psychological Perspective* (New York: The Free Press, 1969), p.21.

<sup>96</sup> Alain Touraine, *The Voice and the Eye: An Analysis of Social Movements* (Cambridge: Cambridge University Press, 1981), p.80.

<sup>97</sup> *Ibid.*, p.95.

<sup>98</sup> quoted in Ron Eyerman and Andrew Jamison, 'Environmental Knowledge as an Organizational Weapon: the Case of Greenpeace', in *Social Science Information*, Vol. 28, No. 1 (March 1989), p.112.

movement that was born out of the modern industrial spirit and its need to adopt; and as such it will also die with it.

Moreover, reform movements have to bear in mind that the very activities they engage in also help to reinforce and legitimate the core assumptions of the society they participate in. Lakatos emphasised that any modification of the protective belt automatically defends “*the thus-hardened core*”.<sup>99</sup> Ultimately, reform movements facilitate a society in maintaining the status quo.

This calls for a re-evaluation of the claimed success of the environmental movement – a change in policy, being accepted into the decision-making process, gaining the status of advisor and consultant in environmental matters. The cost of achieving this type of ‘success’ has to be taken into consideration when assessing the outcome. Amongst the costs of accepting the hard core are, first of all, the effects which the use of a reductionist, mechanical and objective scientific knowledge has for the relationship between humans and Nature. The environmental movement embraces scientific knowledge and thus a knowledge that seeks to dominate and control Nature. This means it has effectively traded in its aim of achieving more harmonious relations between human society and Nature.

Secondly, by embracing scientific knowledge the environmental movement has become part of the power of science and thus defends “*the thus-hardened core*” of the existing society and its regime of truth. Yet by subscribing to the scientific regime of truth, the environmental movement itself becomes part of the power exercised by science and a vehicle in the subjugation of alternative types of knowledge. By embracing the scientific discourse, the environmental movement disqualifies other

types of knowledge, diminishes other “subjects of experience and knowledge”,<sup>100</sup> and enthrones environmentalism. Effectively, environmental movements and the individuals that participate, become a part of the power of science. The environmental movement is thus a vehicle of the power of the scientific regime of truth and its correlating social structure, modern industrial society. It helps to shape and structure public attitudes towards the environment in accordance with the dominant regime of truth.

Finally, although environmental groups are able to contribute to the type of evolutionary change modern industrial societies are undergoing, their room for manoeuvre is at the same time restricted by the negative heuristic. This type of situation relates to what Foucault has called a state of domination where “the relations of power are fixed in such a way that they are perpetually asymmetrical and the margin of liberty is extremely limited.”<sup>101</sup> Foucault provides the following example:

In the traditional conjugal relation in the society of the eighteenth and nineteenth centuries, we cannot say that there was only male power; the woman herself could do a lot of things: be unfaithful to him, extract money from him, refuse him sexually. She was, however, subject to a state of domination, in the measure where all that was finally no more than a certain number of tricks which never brought about a reversal of the situation.<sup>102</sup>

It is in such a situation of domination that environmental organisations find themselves in. They can apply certain tricks by using scientific knowledge to prove that current modes of industrial production and consumption are harmful to the environment. And yet, they cannot reverse the situation precisely because they

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<sup>99</sup> Lakatos, *Methodology of Scientific Research Programmes*, 1978, op. cit., note 60, p.48. Emphasis added.

<sup>100</sup> Foucault, *Power/Knowledge*, 1980, op. cit., note 40, p.85.

themselves subscribe to the scientific regime of truth which directs and frames their thoughts and actions away from the hard core. Ultimately, the type of change they achieve can only be cosmetic or superficial because the hard core principles will always remain intact.

Foucault did provide an indication of where resistance would emerge in such situations of domination, namely in the field of obligation to truth:

It is indeed in this field of obligation to truth that we sometimes can avoid in one way or another the effects of a domination, linked to structures of truth or to institutions charged with truth ... We escape then a domination of truth, not by playing a game that was a complete stranger to the game of truth, but in playing it otherwise or in playing another game, another set, other trumps in the game of truth.<sup>103</sup>

In other words, since it is only possible to reform the existing but not to radically transform it, those who seek to bring about real change can only do so by abandoning the existing hard core, by playing a different game of truth “whose validity is not dependent on the approval of the established régimes of thought.”<sup>104</sup> Here, Gandhian forms of political activism provide useful guidelines for those activists who seek to bring about an ecological societal model.

### 2.3.2. The Pursuit of Gandhian Forms of Political Activism

The importance of Mahatma Gandhi’s teachings and his concepts of *satyagraha* (non-violent resistance), *swadeshi* (self-reliance), and *swaraj* (self-rule), to bringing about

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<sup>101</sup> Michel Foucault, ‘The Ethic of Care for the Self as a Practice of Freedom’, in James Bernauer and David Rasmussen (eds.), *The Final Foucault* (London & Cambridge, MA.: MIT Press, 1994), p.12.

<sup>102</sup> *Ibid.*, p.12.

<sup>103</sup> *Ibid.*, p.15.

<sup>104</sup> Foucault, *Power/Knowledge*, 1980, op. cit., note 40, p.81.

social change has previously been recognised.<sup>105</sup> Non co-operation recommends the withdrawal of one's consent from the existing societal model. "If the people co-operate in order not to allow that system to continue," Gandhi argued, "its foundation will go; it will crumble right today."<sup>106</sup> Non co-operation can take various forms, including the renouncing of titles and honorary positions, the withdrawal of children from state schools, the refusal of invitations to Government functions and parties, the boycott of courts in order to get disputes settled amongst the people themselves, as well as other forms of civil disobedience, such as the boycott of public institutions, marches, non-payment of taxes, and the deliberate defiance of a specific law.<sup>107</sup>

In order to maintain and strengthen the alternative societal model and its correlating knowledge system, Gandhi's advice is to enhance *swadeshi*, or self-reliance. Gandhi advocated the development and implementation of Constructive Programmes. Opposition to an unjust society is combined with the development or creation of a viable alternative societal model. Gandhi suggested the establishment of cottage industries, "hand-grinding, hand-pounding, soap-making, paper-making, match-making, and oil-pressing", and to promote the use of "village articles whenever and wherever available."<sup>108</sup> Other examples are printing, carpentry, shoe-making, gardening, and house-building.<sup>109</sup> In other words, Gandhi inspired people to take charge of their local economy, to use local resources, skills and local knowledges, and in doing so to exercise a form of power:

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<sup>105</sup> See for example Vandana Shiva, 'Reversing Globalisation: What Gandhi Can Teach Us', in *The Ecologist*, Vol. 29, No. 3 (May/June 1999), pp.224/225.

<sup>106</sup> Mahatma Gandhi, 'How to Tackle Evil Customs' *Navajivan*, 14 March 1926, in Raghavan Iyer, *The Moral and Political Writings of Mahatma Gandhi*, Volume III (Oxford: Clarendon Press, 1986), p.169.

<sup>107</sup> Mahatma Gandhi, 'Non-Co-operation' *Navajivan* 4 July 1920, in Iyer, *ibid.*, p.127.

<sup>108</sup> Vivek Pinto, *Gandhi's Vision and Values: The Moral Quest for Change in Indian Agriculture* (New Delhi/London: Sage, 1998), p.135.

Capitalism, therefore, is to be resisted not with the ways open to capitalism but with absolutely new weapons. If only employees will realize the power within them, they will not, as they do today, merely change form but they will radically change the substance. And for this desirable reform the power comes from within. One does not need to wait till the rest have made the commencement. One person making the beginning will in the end be enough to destroy the system.<sup>110</sup>

A universal and global capitalism, according to Gandhi, is to be resisted with new weapons, that is with local, particular skills and knowledges. In this type of resistance, therefore, the individual as the holder of these local and particular skills and knowledges emerges as the key political actor. In contrast to conventional notions where individuals are considered powerless unless they are members of an organisation, party or pressure group which is willing to represent their interests, Gandhi reinstalls power within the individual. Resistance becomes local and particular and it is the individual who is the key agent for instigating social change. Unlike demonstrations or protests, this type of social movement activism is not visible as such but enters into every aspect of daily life. Here, the personal is political, and life-style practices become the most important form of political activism.<sup>111</sup> As Ivan D. Illich argued: “We can only live these changes: we cannot think our way to humanity. Every one of us, and every group with which we live and work, must become the model of the era which we desire to create.”<sup>112</sup> Participation in this type of political strategy, therefore, cannot be measured by the number of heads, signatures, or ballots.

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<sup>109</sup> Mahatma Gandhi, ‘Ahimsa in Practice’, *Harijan* 27 January 1940, in Iyer, *Writings of Mahatma Gandhi*, 1986, op. cit., note 106, p.219.

<sup>110</sup> Mahatma Gandhi, ‘Letter to Wilhelm Wartenberg’, in Iyer, *Writings of Mahatma Gandhi*, 1986, op. cit., note 106, p.69.

<sup>111</sup> Maria Mies, ‘The Need for a New Vision: the Subsistence Perspective’, in Maria Mies and Vandana Shiva, *Ecofeminism* (London and New Jersey: Zed Books, 1993), p.320.

<sup>112</sup> Ivan D. Illich, *Celebration of Awareness: A Call for Institutional Revolution* (Harmondsworth: Penguin Education, 1973), p.17.

Instead, participation is reflected in the meals we prepare, the work we do, the tools and resources we use, who we interact with and the way we interact with others.

Various examples of such efforts have been introduced in chapter one. Eco-communities, for example, present such attempts to opt out and *delink*<sup>113</sup>. These communities produce their own food and their own energy, thus opting out of centralised production systems and its environmentally destructive methods, such as food miles, packaging, and so forth. Also, these communities reduce the need for income to pay for energy and food, thereby lessening the need to participate in the mainstream capitalist economic system. Furthermore, these groups seek to educate and inspire other people. They provide workshops, tours, and the opportunity to visit their projects. These groups practice self-reliance and support others on this path to personal empowerment. The Hockerton Housing Project provides consultancy work, a contact database, workshops, and publications, such as *The Sustainable Community: A Practical Guide*.<sup>114</sup> Such practices are vital if ‘real’ social change is to be brought about because, as Foucault argued,

the main objective of these struggles is to attack not so much “such or such” an institution of power, or group, or elite, or class, but rather a technique, a form of power.

This form of power applies itself to immediate everyday life which categorizes the individual, marks him by his own individuality, attaches him to his own identity, imposes a law of truth on him which he must recognize and which others have to recognize in him.<sup>115</sup>

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<sup>113</sup> Samir Amin, *Delinking: Towards a Polycentric World* (London and New York: Zed Books, 1990).

<sup>114</sup> Hockerton Housing Project, *The Sustainable Community: A Practical Guide*, February 2001.

<sup>115</sup> Michel Foucault, ‘The Subject and Power’, in Hubert L. Dreyfus and Paul Rabinow (eds.), *Michel Foucault: Beyond Structuralism and Hermeneutics*, second edition (Chicago: The University of Chicago Press, 1982), p.212.

In other words, an alternative societal model is not instigated by those who seek to fight or violently overthrow specific institutions or organisations but by those who refuse to become vehicles of the power of the dominant regime of truth. These are individuals who “announce to society that something ‘else’ is possible”,<sup>116</sup> both in thought and deed. Part of the strategy is to question the meanings, concepts, knowledges and practices that we have come to accept as normal in our daily routines and in our relations with others, and instead to “publicize new alternatives.”<sup>117</sup>

Constructive Programmes provide the basis for self-reliance but they also make the alternative societal model in itself ‘real’. As Henri Lefebvre argues, social conflict is expressed in space. Since every society produces its own space,<sup>118</sup> “the shift from one mode to another must entail the production of a new space.”<sup>119</sup> Lefebvre thus advises social change-oriented actors to create a new space. “Space is becoming the principal stake of goal-directed actions and struggles,”<sup>120</sup> Lefebvre argued, and that the production of space “is a matter of life and death”<sup>121</sup> because

groups, classes or fractions of classes cannot constitute themselves, or recognize one another, as ‘subjects’ unless they generate (or produce) a space. Ideas, representations or values which do not succeed in making their mark on space, and thus generating (or producing) an appropriate morphology, will lose all pith and become mere signs, resolve themselves into abstract descriptions, or mutate into fantasies.<sup>122</sup>

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<sup>116</sup> Alberto Melucci, ‘The Symbolic Challenge of Contemporary Movements’, in *Social Research*, Vol. 52, No. 4 (Winter 1985), p.812. Emphasis in original.

<sup>117</sup> Alberto Melucci, *Nomads of the Present: Social Movements and Individual Needs in Contemporary Society*, edited by John Keane and Paul Mier (London: Hutchinson Radius, 1989), p.63.

<sup>118</sup> Henri Lefebvre, *The Production of Space*, translated by Donald Nicholson-Smith (Oxford: Blackwell, 1991), p.31.

<sup>119</sup> *Ibid.*, p.46.

<sup>120</sup> *Ibid.*, p.410.

<sup>121</sup> *Ibid.*, p.417.

<sup>122</sup> *Ibid.*, pp.416/417.

In other words, those who seek to bring about change have to materialise their values, beliefs, types of knowledge - their version of reality - into a physical formation in space.

### 2.3.3. Structural or Revolutionary Change

The second option available to those who seek to instigate change, therefore, is to delink, to opt out of the existing societal model and to join or create an alternative type, a world-view that has institutionalised one's ideals at its hard core, including an alternative knowledge system. Alain Touraine referred to this undertaking as *revolutionary critical action*.<sup>123</sup> If people choose to play a different knowledge game and to opt out of the existing societal type, one or even more new models for organising society will emerge and develop alongside the old model. In this case, the knowledge associated with the dominant society is not identical with the underlying total phenomenon and the two contradict and might even enter into conflict with each other. The alternative societal type may geographically be located within the boundaries of the dominant society, the network of sustainable communities within the UK for example, yet analytically they are *societal outsiders* to this societal type and its way of knowing and practising the world. If the alternative societal type gains sufficient members, *structural or revolutionary change* - a systemic break from one societal type to another - will occur. Gurvitch identified the key actors responsible for instigating such systemic breaks as rising social classes, "partial social worlds which

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<sup>123</sup> Alain Touraine, *The Self-Production of Society*, translated by Derek Coltman (Chicago and London: The University of Chicago Press, 1977), pp.389-411.

are aspiring to become total social worlds as exemplified by global societies.”<sup>124</sup> Rising social classes thus refer to Blumer’s definition of social movements as “societies in miniature,”<sup>125</sup> as “collective enterprises to establish a new order of life”.<sup>126</sup> I will refer to these as alternative movements, as opposed to reform movements (Fig. 6). Essentially, alternative movements seek to bring about an alternative societal model.

	INSIDERS	OUTSIDERS
TYPE OF MOVEMENT	Reform movement	Alternative movement
TYPE OF SOCIAL CHANGE	Evolutionary change	Structural change

**FIG. 6: Social-change oriented actors**

The new social movements that emerged from the late 1960s onwards expressed many of the features of a new societal type. These movements aimed for participatory politics - as opposed to the representative feature of the traditional political sphere and its process of decision-making. Their networks are de-centralised, essentially local and small-scale in nature, including self-help groups, and communes – as opposed to existing centralised and hierarchical structures. In the economic sphere LETS schemes, co-operatives and direct links between producer and consumer are promoted – as opposed to the competitiveness and impersonality of the Common and global markets. The knowledge system of alternative movements also differs, as was outlined

<sup>124</sup> Gurvitch, *Social Frameworks of Knowledge*, 1972, op. cit., note 1, p.89.

<sup>125</sup> Blumer, ‘Social Movements’, 1969, op. cit., note 95, p.22.

in chapter one at the example of ecologism. Its knowledge hierarchy prioritises other types of knowledge over and above modern scientific knowledge. The knowledge system of the ecology movement is thus an exemplar of what Foucault has identified as “an autonomous, non-centralised kind of theoretical production, one that is to say whose validity is not dependent on the approval of the established régimes of thought.”<sup>127</sup> The knowledge system of *societal outsiders*, therefore, resembles what Foucault called *subjugated knowledges*, “a whole set of knowledges that have been disqualified as inadequate to their task or insufficiently elaborated: naïve knowledges, located low down on the hierarchy, beneath the required level of cognition”.<sup>128</sup> It is in these subjugated knowledges that we can expect to find the true actors of social change because they play a different game of truth. In contrast to reform movements who confirm hard core assumptions, these alternative movements challenge the entire existing societal model because

People are offered the possibility of another experience of time, space, interpersonal relations, which opposes operational rationality of apparatuses. A different way of naming the world suddenly reverses the dominant codes ... As prophets without enchantment, contemporary movements practice in the present the change they are struggling for...<sup>129</sup>

It should be emphasised, however, that an alternative societal model does not necessarily reject everything the existing societal type stands for or has achieved, nor does it mean going back in time. The ecology movement of the early twenty-first century, for example, is not the same as that of the eighteenth or nineteenth century.

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<sup>126</sup> Ibid., p.8.

<sup>127</sup> Foucault, *Power/Knowledge*, 1980, op. cit., note 40, p.81.

<sup>128</sup> Ibid., p.82.

<sup>129</sup> Melucci, ‘The Symbolic Challenge’, 1985, op. cit., note 116, p.801. Emphasis in the original. Alberto Melucci, ‘An End to Social Movements? Introductory Paper to the Session on “New

What has remained consistent over the centuries is its hard core belief of humans living in harmony with Nature. Yet today's ecologism is a societal type that has evolved over the centuries by adjusting its protective belt to the new circumstances it faces. For this very reason, today's ecologists do not want to go back to a peasant society, or to the protective belt of an ecologism of the Middle Ages. As one member of Brithdir Mawr said, "We do not wish for a return to pre-industrial society. I believe most of the people at Brithdir Mawr would like to see a sensible use of appropriate technology, human-scale and humane agriculture and industry". Ecologism has been able to incorporate modern technologies, for example, into its protective belt so that they function as an affirmation of its hard core. The subsequent extract from the writing of Tony Wrench on the new technology used for the turf roof of the roundhouse at Brithdir Mawr, mentioned in chapter one, illustrates this point:

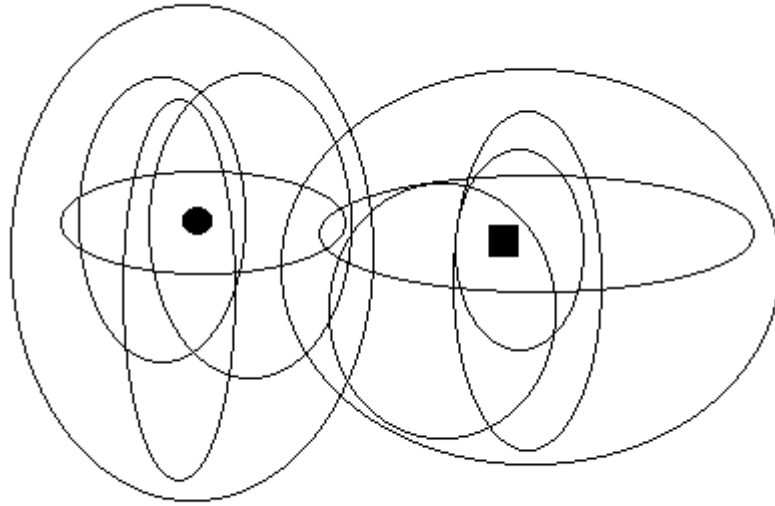
I honestly believe that if our ancestors had invented a way of making single large waterproof sheets that were of organic materials and lasted 30 years or more, the whole look of our civilisation would have been different. Most modular roof systems, like slates, were a very time consuming, heavy and expensive way of trying to keep water out over a reasonable surface area, and needed a steep, flat slope with strong inflexible supports to hold them up. Hence our ideas of vistas of pointed roofs, gable ends, and all the paraphernalia that goes with what we think a group of 'houses' looks like. We are almost stuck with this shape, based though it is on technological limitations of the middle ages ... Imagine if rubber pond liners had been available 200 years ago. Our expectation of what a human settlement looks like might be more like a badger set with skylights. Technology doesn't have to be big and hard and shiny and fighting nature. Technology could lead us back to a more harmonious relationship with nature, and if this house demonstrates only that, its construction will have been worthwhile.<sup>130</sup>

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Movements and Change in Organizational Forms", in *Social Science Information*, Vol. 23, No. 4/5 (1984), p.830. Emphasis in the original.

<sup>130</sup> Tony Wrench, 'Turf's Up: D.I.Y. Turf Roofing', in *Permaculture Magazine*, No. 27 (Spring 2001), p.43.

It is here, therefore, at the boundaries of their protective belts, that alternative societal models, including the forms of sociality, groups and social classes that make up this societal type, overlap. (Fig. 7)



**FIG. 7: Alternative Societal Types** (characterised by their adherence to unique hard core principles)

To clarify, competing societal types and their respective versions of reality are not incommensurable as such. For example, as Bronislaw Szerszynski points out, environmentalism and ecologism are both caught within the modern problematic, the concern with “how, in a universe stripped of meaning and purpose, we can still ground behaviour and judgement in something more than mere human self-assertion.”<sup>131</sup> The notion of incompatibility emerges only, and is sustained, as a result of the power that is exercised by the dominant societal model of modern industrial societies. To rephrase Fuller, modern industrial societies maintain their authority by

claiming to have superior knowledge, with the effect that they restrict the number of eligible critics, suppress ecological voices, and consign ecologism to worlds incommensurable with their own.<sup>132</sup> In other words, the notion of *incommensurability* emerges, and is sustained, because the dominant societal model refuses to communicate with representatives of alternative systems.

Left to their own devices, academic disciplines follow trajectories that isolate them increasingly from one another .... [S]pecialization serves to heighten the incommensurability among the ends that the different disciplines set for themselves, which, in turn, decreases the likelihood that the experts will amongst themselves be able to coordinate their activities in ways that benefit more than just their respective disciplinary constituencies.<sup>133</sup>

If Fuller is right, pluralism in itself does not guarantee the emergence of a sophisticated societal system in equilibrium. It is not sufficient to merely grant diverse traditions equal access to power, as Feyerabend suggested.<sup>134</sup> Instead, communication between diverse traditions has to be re-established in order to overcome cultural differences.<sup>135</sup> Diverse traditions need to be made aware that they are all “entangled in a common fate”<sup>136</sup> and that they have to accept responsibility not only towards those within but also towards those outside their respective communities.<sup>137</sup> For Fuller, therefore, the future lies in the ‘overlap’, “the incorporation and elimination of opposites in a more inclusive formulation.”<sup>138</sup> A truly inclusive Nature politics, therefore, emerges and is conducted only in those areas where neither

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<sup>131</sup> Bronislaw Szerszynski, ‘On Knowing What to Do: Environmentalism and the Modern Problematic’, in Scott Lash, Bronislaw Szerszynski and Brian Wynne (eds.), *Risk, Environment and Modernity: Towards a New Ecology* (London: SAGE, 1996), p.105.

<sup>132</sup> Fuller, *Philosophy, Rhetoric, and the End of Knowledge*, 1993, op. cit., note 22, pp.27/28.

<sup>133</sup> *Ibid.*, pp.33/37.

<sup>134</sup> See for example Feyerabend, *Science in a Free Society*, 1978, op. cit., note 10, p.9.

<sup>135</sup> Fuller, *Philosophy, Rhetoric, and the End of Knowledge*, 1993, op. cit., note 22, p.27.

<sup>136</sup> *Ibid.*, p.xvii

<sup>137</sup> Fuller, *Governance of Science*, 2000, op. cit., note 9, p.42.

environmentalism nor ecologism dominates or sets the standard, but where the two mutate, or *interpenetrate*, where disciplinary boundaries are re-arranged and where both parties are transformed as a result of their interaction.<sup>139</sup>

However, since my main concern in this study is with the processes and dynamics that hinder the emergence of critique as well as with the role that science plays in establishing environmentalism as the version which determines the conduct and outcome of green politics and that sets the standard against which ecological solutions are judged, I maintain the image of environmentalism and ecologism as two competing social frameworks of knowledge throughout this study.

## 2.4. Conclusion

This chapter, by drawing on the work of Gurvitch, Fuller, Lakatos and Foucault, introduced the approach this thesis will adopt for the study of social phenomena. This perspective allowed me to identify three key assumptions that form the argument of this thesis. First of all, every societal model has a distinct knowledge system that has been institutionalised as part of its hard core. As such, its members accept it as natural and unchangeable. Secondly, where the knowledge system is combined with a world-view that has attained the status of 'truth', it is invincible. It serves to neutralise alternative knowledges and their correlating societal models and only allows for superficial or cosmetic reforms within the protective belt to be introduced. As a result, the only really viable strategy for those who seek to bring about change is to advocate

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<sup>138</sup> Fuller, *Philosophy, Rhetoric, and the End of Knowledge*, 1993, op. cit., note 22, p.37.

<sup>139</sup> *Ibid.*, pp.37/47.

a different truth regime founded in different types of knowledge. Knowledge, in other words, is an essential tool for the exercise of power, both in the exercise of domination as well as the practice of resistance.

Environmentalism, this chapter argued, is the result of the positive heuristic and an extension to the protective belt of modern industrial societies. Modern industrial hard core principles such as science, modern technology, expertise, progress, and management and control of Nature are maintained. Participants in the construction of this environmental protective belt are environmental reform movements. The impact they can achieve is preconditioned precisely because hard core principles restrict the possibilities open for change. Environmentalism, as a successful outcome for reform movements, differs from ecologism, the outcome alternative movements aim for. This has to be taken into consideration when assessing the outcome and strategy of green movement activism.

The perspective developed in this chapter cannot reject the strategy adopted by groups such as *Greenpeace* as such. If these organisations *want to be taken seriously* by the key players within modern industrial societies so as to convince these that the environmentally destructive practices their societies engage in need to be brought to a halt, they have to embrace the hard core principles of their opponents. Hard core principles, such as knowledge, function as a common denominator and facilitate the interaction of certain actors over certain issues while others that do not comply become non-issues, excluded or rejected. The impact such organisations can achieve, however, will only be evolutionary, environmental, in nature. If the movement aim is to *bring about real change*, therefore, then the ecofeminist position and its advocacy of a different knowledge system must be confirmed as the right

strategy to be pursued. Its approach to knowledge production and distribution is democratic and participatory, it produces knowledge that people need to live sustainable lives, and it does so without causing adverse effects to the social and the natural environment.

This chapter has also identified the two forms of power truth regimes exercise. On the one hand, power is exercised over the members of a particular RP or societal model. Members are confined in their thought and practice by the particular set of hard core assumptions they have subscribed to. In the case of the scientific truth regime, on the other hand, power is also exercised over outsiders. It serves to delegitimise and ultimately neutralise these. This study is not so much interested in the first form of power which functions as a tool in the exercise of domination *within* a particular societal model as in examining the role of knowledge in maintaining the domination of one particular societal model *over* other alternative social systems. The perspective developed in this chapter argues that knowledge functions as a key device in a society's buffering mechanism against those who seek to bring about change. These insights are of particular relevance at a time when the knowledge that assists in reality-maintenance, that participates in the assimilation and neutralisation of those that seek to bring about change, also correlates with a social structure that has reached neither ecological, social, political, economic or ethical sophistication.

In the subsequent chapter I will now illustrate the argument developed in these pages by looking at the social movement theories that have emerged alongside the green movement in order to examine how academic knowledge production serves to legitimise certain agents or topics whilst it renders others invisible.