European Journal of Science and Theology, June 2008, Vol.4, No.2, 9-22

APPROACHING THE TIPPING POINT
CLIMATE RISKS, FAITH AND POLITICAL ACTION

Stefan Skrimshire*

School of Arts, Histories and Cultures, The University of Manchester
Manchester M13 9PL, UK

(Received 15 April 2008)

Abstract

Scientific and media reports have become enthralled by the apocalyptic overtones of climatic 'tipping points'. These are thresholds after which a relatively small shift in the Earth system (e.g. melting Arctic perma-frost) has a big, sudden impact on the overall system. Related is the prospect of runaway or 'irreversible' global warming. But it has also revived an interest in its original sociological sense – i.e. tipping points in social and political movement. How do we relate the two? Given the possibility that certain catastrophic events may be unavoidable, climatic tipping points present a situation of global risk unlike any considered before. They introduce an element of radical uncertainty into the very value of taking action.

In this paper I argue that ethical bases for taking action must think *beyond* thresholds assumed by calculations or traditional probabilities of risk such as the precautionary principle or cost-benefit analysis (or simply the assumption that 'my actions will be meaningless unless *this* happens by *this* time'). I demonstrate this by reporting from an emerging political movement in the UK that is demonstrating precisely the value of risk-taking in the 'public sphere' of non-violent direct action. Appropriately enough for (Hansen's) reference to the question of redemption, theological insight may indeed have something to contribute here. For an ethics that places imperatives for faith in action *prior* to epistemic certainty (doing, in other words, comes before knowing) lies arguably at the root of many religious or otherwise utopian traditions.

Keywords: tipping points, climate change, direct action, risk, faith

'We are on the precipice of climate system tipping points beyond which there is no redemption.' (Jim Hansen, NASA scientist)

'Everything one writes is overshadowed by this ghastly feeling that we are rushing towards the precipice and, though we shan't actually prevent ourselves or anyone else from going over, must put up some sort of fight'.
(George Orwell)

* e-mail: stefan.skrimshire@manchester.ac.uk

1. Introduction: experiencing tipping points (how was it for you?)

Tipping points are rhetorically powerful because they are, at root, about sudden shocks. They refer normally to the 'threshold behaviour' of systems, elements which cause a linear state to switch into "qualitatively different state" [1]. No wonder world media has, at least since 2004, been consistently enthralled by the reporting of apocalyptic tipping point scenarios in global warming. As Gabrielle Walker notes, in 2004, 45 newspaper articles cited the term, compared with 234 in *one month* in 2006 [2]. When? Where? To whom? How bad will it be? Herein lies the paradox, however, since such tipping points betray the normal calculable linearity of Earth systems modelling. They represent in a loose sense the prediction of the unpredictable. But for the purposes of this paper they also represent the prediction of the ethically *unthinkable*. A threshold accumulation of green house gases represents a scenario in which global warming becomes unstoppable, carried by its own momentum (involving multiple positive feedback loops), and in some cases irreversible. The most frequently cited factor by way of illustration is the rapid melting of the Arctic sea ice. The Arctic has been described as a 'giant solar mirror' reflecting the Sun's rays [3]. Increased levels of melting of the 'perennial' summer ice produce an ice-albedo effect: more surface area of open water means less surface reflectivity of heat and increased warming of the seas, creating a positive feedback loop.

Tipping points therefore also carry an implicit uncertainty with regard to traditional risk management. As a former government advisor on the environment put it in early 2006 "we have actually entered a new era…We have passed the point where we can be confident of staying below the 2 degree rise set as threshold for danger" [4]. Mark Lynas warns that we could experience this scenario (in which the unstoppable melting of the Greenland ice sheet would be unstoppable, triggering an estimated seven metre global sea level rise) as early as 2050: "in geologic terms, it is instantaneous. If you have ever wondered what it will feel like when the Earth crosses a tipping point, savour this moment" [3].

The purpose of this paper is not to contribute one more lamentation on the state of our climate, nor another opportunity to indulge in finger-wagging. Rather, it is to take Lynas' (possibly) tongue-in-cheek remark seriously. What, indeed, does it mean to experience a climatic tipping point? If the newspapers bear any responsibility for taking our cultural pulse, we would seem to be simultaneously awaiting, imagining, fearing and fantasising about their imminence. But little can be said, it would seem, about how we feel about *passing* them. There are certainly sociological and psychological questions to be asked here: how, for example, is this experience filtered to us beyond the scientific abstractions of degrees centigrade, parts per million, and percentage rise allowances? But I want to argue that responding to the evidence and rhetoric of tipping points introduces important and underexplored *ethical* dilemmas. The dilemma is emphasised in the popularised rhetoric (voiced most prominently by NASA scientist Jim Hansen in 2006) that humans have 'ten years left' to avert

'serious' catastrophe [5]. Perhaps the rhetoric should be taken seriously as the 'wakeup call' needed for radical social transformation. On the other hand, presuming a calculable time frame for defining meaningful action, or action that will 'make a difference', is both politically expedient and ethically unwarranted. Expedient, since it gives people one more reason to assume that, given continually diminishing opportunities, they cannot impact upon the future. This is misleading: there will clearly always be 'something to do' in response to climate change whether or not a 'critical tipping point' has been reached (increasing humanitarian aid will be only the most immediate). It is ethically unwarranted because people can and do act all the time for motivations that appear entirely 'too late', incalculable in their impact, utopian or otherwise 'irrational' in their aspirations. Their *doing* nevertheless may well have ethical grounds and social value independently of such predictions. I will demonstrate the latter point in what follows with references to some new approaches, including a theological angle, to a theory of risk, action and uncertainty.

2. Points of no return: are we 'post-risk'?

Threshold moments are passed all the time depending on one's perspective. A species that becomes *extinct* has clearly reached its own point of no return [6]. In our current period of the now popularly termed 'sixth mass extinction event', moreover, it is estimated that around one species is lost every ten seconds [7]. This happens without arousing much ethical controversy or significant public outcry. We need to ask, then, t*o what or whom* is the notion of return ethically relevant? Moreover, *irreversibility* refers once again to questions of timescale. Scientists observe that the planet has suffered comparable temperature increases in the past and recovered. The point, however, is that the recovery took around 100,000 years. This isn't normally what people refer to in assessing a 'return' point. In other words, 'no return' is not strictly the same as irreversibility. The former implies an agent/subject to whom a return is relevant and imaginable. As NASA scientist Gavin Schmitt puts it, the entire planet has already reached a point of no return in the sense that, again because of feedback effects, the planet will be unable to return to pre-industrial temperature within "any reasonable human timescale" [6].

Is there any point, then, in obsessing over points? However inappropriate it is to speak of a final apocalyptic 'event' and whatever lies behind, it would also be disingenuous to ignore the culturally powerful and ingrained rhetoric of such points. For climatic tipping points have a social counterpart that cannot be ignored: social and political 'turning points', historic moments of opportunity, 'now or never', social revolution. All these concepts court our Hegelian fantasy (that history moves dialectically, with purpose) as well as our Marxian one (that it must be seized and transformed) with regard to the unfolding narrative of our future. Schmitt's insight, however, is simply that waiting for one 'dangerous' point "can lead to two seemingly opposite, and erroneous, conclusions – that nothing will happen until we reach the 'point' and conversely, that once we've

reached it, there will be nothing that can be done about it, i.e. it promotes both a cavalier and fatalistic outlook" [6]. To *confront* this reality would therefore seem to imply getting on with addressing those elements that can still be changed. As a recent U.N. climate study put it, our task is 'avoiding the unmanageable and managing the unavoidable' [8].

Some might approach this question of the 'management' of our sphere of environmental change as courting the ultimate *post-risk* discourse. The crucial observation for Ulrich Beck and Anthony Giddens in the early nineties was the distinction made in 'hypermodern' societies between *naturally* occurring dangers and *humanly* caused risks [9]. Risks were, according to this view, the fruits of excessive modernization: through them civilisations organised *around* the proliferation of insecurity. Through discourses of climate risks this distinction becomes blurred. For the popular perception of climate change is a complicity between humanity and nature to create a permanent environment of *both* danger *and* risk with no clear assurance of which elements are within our management or control. At least Beck's risk society was one directed to the proliferation of risk-managing technologies. But climatic dangers are peculiar for their ubiquity and non-specificity – dangers that are everybody's and nobody's (hence the intractable problem to insurance companies of guilt and blame for climatic disasters). As such the imminence of tipping points can rarely be relied upon to generate reactions on a par with, say, the threat to an individual's health through deadly virus or nuclear accident. A typical opinion poll summarises the problem: in 2007 British people were 'convinced about the dangers of global warming'. In spite of this 'it has not triggered demands for urgent action…in Britain, people have made no noticeable changes to their behaviour and are taking increased numbers of car journeys, going on more flights, pumping out more carbon dioxide and using more electricity to heat their homes' [10]. With regard to climate, therefore, the calculability of one's actions is seen commonly as disproportionate and meaningless [11]. How can I know what kind of part my actions of refusing to drive or petitioning government play in global attempts to avoid 'dangerous' levels of carbon emissions whose effects may only come into effect in 30 years' time? Whether at an individual or governmental level, the problems of risk and uncertainty are thus one and the same: "there are different tolerances for risk…three hundred and fifty [parts per million of carbon dioxide in the atmosphere] is safer than 450, which is safer than 550, but no one really knows where the dangerous point is. All we know is that we are going towards one." [12]

Points of no return, then, might be seen as post-risk because they require confronting crises whose palpable uncertainty (as to whether or not we can avoid them) continually threatens to undermine this risk-responsiveness itself. How many campaigning strategies will cite the evidence that if the entire planet stabilised its CO_2 emissions, global temperatures would still continue to rise, and that even if human completely cut CO_2 emissions, global temperature would 'remain high for at least 500 years' [13]? The implication is that, in terms of carbon emissions at least, our best efforts would not guarantee averting some of

the worst predicted global catastrophes. Managing climate risks (or being 'on top of the problem'), a position belligerently defended by governmental rhetoric, is replaced by the chase of time horizons: ethical parameters for action move uncertainly between risk *avoidance* and risk *acceptance*: it's too late for *this*: act to prevent *that*.

3. Action and uncertainty

Identifying 'ethically' with a future we might not inhabit and cannot be sure will exist at all is problematic but crucial for a new approach to the ethics of climate change. What can we learn, in light of this problematic, of contemporary actions themselves? Of the more significant recent trends in social movement responding to 'abrupt climate change' has been, in Europe, the US and Australia, of a network of climate change activists. The specific interest for this study comes from their dual intentions of a) disrupting 'business as usual' for the fossil fuel industry and b) the promotion of alternative social and political strategies for living in independence of a carbon economy. Coordinated by groups such as Rising Tide, the Camp for Climate Action, Earth First! and Plane Stupid, typical events in the UK have been: 2 week long 'climate camps' taking direct action at Drax power station and Heathrow Airport and coordinated 'days of action' in which groups have used non-violent direct action to disrupt the working of prominent fossil fuel industry infrastructure. These mobilisations represent the culmination of civil disobedience tactics from two decades of precedent anti-capitalist and anti-roads movements and the coalescing of a variety of social and environmental campaign targets.

Let us take as a typical isolated example the 2008 Camp for Climate Action and related acts of civil disobedience around the country, the event which prompted George Monbiot to claim that "a new political movement has been born" [14]. The Camp was organised around three guiding principles and aims: 'Low-impact living, education and high-impact direct action'. In practice this meant an enormous logistical operation to construct a working exemplar of carbon free, low-impact, non-hierarchical organisation and skills-sharing (from permaculture gardening to local 'transition' strategies workshops), as well as the base for education and debate on the causes of climate change (hosting over 100 workshops) and the opportunity to unite in direct action against the 'belly of the beast' – the aviation industry only 2,000 feet away. The actions themselves were diverse, and had support from local residents, ranging from symbolic marches through the territory of Sipson village proposed for the new runway, to secretly planned blockades of the BA world cargo depot and a siege of BAA headquarters.

Why focus for this analysis on the most confrontational of a new wave of 'climate action' groups? The origin, motive and strategy for such groups is far from problematic and many other examples exist, from the UK pioneered Transition Town movement to a broad-based lobby coalition of groups such as Icount and Stop Climate Chaos. Nevertheless, the example of this more

confrontational movement is significant for its departure from a dominant perception that 'small actions' constitute the predominant option for 'optimistic' responses to catastrophic climate reports [15]. Direct action groups represent at very least an attempt to depart from this stereotype. Attempting synergy between models of sustainable living with the ability to take direct action represents a significant shift in emphases on the function of activism in civil society. As one 'insider' view put it: 'One of the biggest successes of the camp was the way that it invigorated a whole new generation of activists. Climate chaos has always been daunting for campaigners: Where do you start? Where can you really have an effect? The camp broke down this fear and inspired people who had never acted before to go out and engage in a very direct way' [16]. In fact the occasion of a week of media, political and action coordination did focus a number actions to appear as part of a national groundswell of opposition that might have gone otherwise unnoticed. Despite intense surveillance and harassment operations by groups known to the police, the same week saw offices at Gatwick, numerous travel agencies, the UK Department of transport, air-freight companies, and nuclear power stations blockaded and disrupted through peaceful actions around the country (Indymedia, 2007) [17].

These actions are only isolated examples of a more general move towards a model of *risk-willingness* that is underexplored in analyses of the ethics of climate change. In one of the more obvious studies to include a serious discussion of the subject, James Garvey's anodyne *The Ethics of Climate Change* cites only the awareness that civil disobedience for the sake of decreased consumption can appear 'less than rational' [18]. In fact the concept of 'taking direct action' addresses head-on the 'uncertain' stance of a politics facing the prospect of points of no return. Of course activists 'risk' in a merely practical sense (risking arrest, harm, negative media reporting etc). But they also risk in an epistemological sense: they act in resistance to a scenario or scenarios of implicit uncertainty (we do not know what further surprises the climate has up its sleeve). They tackle culturally assumed parameters of 'proportional' responses to the scientific evidence of climate predictions. If actions *do* repeat this calculability of which actions come 'too late' they run the risk of fracturing along the same lines that popular sentiments of everyday disempowerment do in response to climate crisis: I can't possibly avoid *this* scenario; scientists say we're all doomed, so what's the point, etc. But the rationale for a broadly conceived climate action *movement* suggested above places the imperative to act on the need for a paradigm shift in cultural practices above all. As the heading on its stated 'aims' declares, the Camp for Climate Action exists to 'overcome feelings of isolation and helplessness by bringing people together to create a community of resistance' (Camp for Climate Action 2008 [19]). The sphere of influence here (transforming social attitudes to living carbon neutrally) is both enormous and far harder for sociologists to calculate on a graph. Undoubtedly, there will be suspicions within the movement itself that certain actions become superfluous in the light of the temporal element of the 'opportunity' presented by climate change. And this will lead some activists to favour action for

adaption to a new vastly warmer planet as opposed to the attempt to radicalise mitigation strategies (to *prevent* a certain level of warming). Yet the sentiments need not exclude each other so long as their mutual target is the resistance of a political process that undermines the very *possibility* of change for the better.

The new implications for risk are therefore how to act *upon* endemic uncertainty with regard to knowledge of both the future and our sphere of influence upon it [20]. It is thus worth listening at this point to Hannah Arendt's understanding of action. For the principle of action implies taking initiative or 'beginning' something first and foremost [21]. It is *not* the certainty of ruling, seizing power or 'knowing' in the sense of controlling that which one begins. Human action is unavoidably caught up in the contingencies of others' actions and of the given world in general. *Knowing* and *doing* thus become two aspects of the same element of (uncertain) future responsibility [20]. We choose either to 'know' a future mechanistically, as the continuation of probable trends (and to which we remain detached and helpless) or to know it as the habitat of life to which we bear responsibility. Arendt can thus be seen to lay foundations for risk-willingness by attempting to reclaim human action from its instrumentalist use through technological security [21, p. 230]. As for the principle of irreversibility, Arendt is aware we continually court this possibility, through technological experimentation or the simple fact that each of our actions starts something it might not be able to finish. The important thing is that committed action does not rely upon a discourse of security to justify acting since knowledge of such security is, today more than ever, unavailable.

For Arendt the concepts of *promise* and *forgiveness* thus become crucial as 'means of redemption' to the 'unboundedness and uncertainty of actions and their irreversible and unknowable impacts' [20, p. 167]. The category of forgiveness is of most interest here. In Arendt's conception, we consider the future not as some empty space to colonise but an inhabited space with whose life we are intimately involved. The price of social freedom and the uncertainty of the interconnected web of consequences of our actions require that we forgive the actions of our forebears. But it also requires an awareness of our 'unbroken webs of obligation' towards the not-yet present [20, p. 169]. This point is raised through Arendt's interest in Jesus' prophetic message. By instituting (through the apostle Peter) the (earthly) power of forgiveness, Jesus acknowledges that the causal web of intended and unintended consequences *requires* that we forgive simply in order to get on with life [21, p. 240].

An ethics that accepts its future consequences must therefore re-route action to responsibility without the need for (scientific and economic) certainty [20, p. 185]. Similarly ethics of future 'irreversibility' must also find a rationale for political intervention that connects action to responsibility without routing via the epistemic certainty of what is 'timely' or 'too late'. It is important to see that Arendt's connection between irreversibility and forgiveness relates to the existential 'predicament' of action in general. Once begun, action commits us to consequences the sum of which we cannot possibly retain control of. Rather than letting go of responsibility, Arendt exhorts us to apply the radical sense of

forgiveness to both an unredeemed past and an uncertain future [21, p. 239] as commitment to a life of action. The possibility that the future contains points of no return need not imply that we simply abandon scientific knowledge *per se* (closing one's ears to the truth so as to preserve the illusion of an implicit mythology of political action). It must abandon, rather, the *epistemic* privilege often given to those actions that have a measurable guarantee of success. It also implies a degree of *faith* in our actions that undermines a cornerstone in liberal thinking of environmental risks: the precautionary principle, which at its simplest instructs us to 'avoid steps that will create a risk of harm' [22]. Within this broad definition, of course, will appear versions of either extreme precaution (if there is any risk, however uncertain, act to avoid it) and an 'epistemic conservatism' (only act in situations in which the dangers have rigorously scientific proof) [23]. But the principle of approaching tipping points highlights the inadequacy of the epistemological assumptions of the very principle. This is because the risks being considered include total catastrophe and an end to decision making itself (i.e. to human life). The *cost* of acting is trivialised by any anticipation of benefits 'in the long run': "If no recovery is possible there is no long run." [23, p. 94].

4. Faith in the future

The suggestion above aims at the false calculability of 'reasons' for acting along prudential cost-benefit analysis with regard to our climate. It might also be interpreted as welcoming the utopian element present in some aspects of radical environmentalism as opposed to its status as strategic damage limitation. Traditional sociological risk theory presupposes a distinction of present risk awareness from the pre-modern belief in divinely ordained (external) risks. They would also admit, however, that the western enlightenment attempt to colonise that future through economically driven predictions of scientific rationality have been a calamity for social and ecological life. Where then do we draw resources for rethinking risk? Christian theologian Niels Henrik Gregersen argues that religion has too easily been assumed to represent a pre-modern risk paradigm, favouring the perception of external and divinely ordained *dangers* over humanly-produced *risks* as the focus for human faith. This 'secularist myth of replacement' [24] follows the standard risk doctrine of Beck and Giddens [25, 26], and it is rightly criticised not only as simplistic and misleading. It also can be seen to ignore the hidden potential for a risk-oriented discourse to challenge the 'epistemic biases of industrialised knowledge, or in other words the dominance of 'knowing' the future only through the lens of industrial cost-benefit analysis and the paradigm of safety and precaution. The risk-experience within religious traditions in fact condenses the contemporary experience of risk as focussed neither solely on fate (danger) nor on control (risk) but a mixture of the two, and in so doing 'nourishing a risk-willingness among citizens in hyper-complex societies' [27]. For Gregersen, a theology of Creation makes it possible to acknowledge both the contingency of the 'givenness' of Creation *and* the

ability to view its risks 'positively' [24], i.e. by inviting commitment to the Creation, whether through responsible stewardship or through the upholding of justice in spite of climate risks.

This is not the place for assessing the problems that such a view of creation might engender (anthropocentrism is an obvious and much discussed example). The point I want to raise is more simply that Gregersen's observation contributes to a significant 'post-secular' rationale of committed risk-taking action. He appreciates, that is, a host of motivations, beliefs and myths that a *merely* precautionary attitude would not allow in its rationalist epistemology. Religious faith in particular represents an awareness of our own constitution and historical embeddedness in the world *including its complexities and uncertainties*. The centrality of Jesus' prophetic message – in which to risk life for one's goal is preferable to 'gaining the whole (material, calculable, at least in principle) world' also defines life as worthy of risk taking.

If the theological expression of risk-willingness appears attractive here for a political appraisal of committed action, it should not be taken as a merely sufficient basis for interpreting the climate crisis today. For Gregersen, the principle expression of authentic risk-willingness comes in Lutheran protestant theology, with its emphasis on the 'objective uncertainty concerning God's hidden will' [24]. This may go some way to resisting the quietist and environmentally fatalistic attitude of certain strands of Christian millennialism (the view that the destruction of the climate simply 'quickens' the position of the righteous to their own soteriological 'time horizon'). Yet Gregersen provides theological and historical appraisal of a broadly calculative (and conservative) approach to risk in order to come down on the side of the risk-taking 'wager'. He thus promotes, unwittingly perhaps, an ethic of risk-calculability in the interests of a kind of pseudo-theological security that our actions are in line with the promise of reward (in accordance with Pascal's wager on the infinite [28]). We should, in other words, be wary of any use of the category of salvation within the discourse of climate risk. Reformation salvation theology in particular represents a paradigm of risk-awareness through its refusal of the 'religious securities offered by law and church' [24] in favour of trusting God's providence. The implication is that material risk-taking is theologically sound because a) Creation is ultimately good, divinely ordained and b) it is insignificant in the face of the promise of salvation: one can follow Jesus' call to renounce the world in pursuit of another one (the kingdom of God). Within the protestant view the significance of this new approach to risk is that it is the *individual's* adoption of risk that counts. The burden of risk no longer lies with the Church and its material (sacramental) assurances of salvation [24]. This overtly Pascalian approach to committed faith is tied firmly to the spirit of capitalism. The point is well rehearsed in reference to Weber who, in charting the rise of the protestant ethic reveals that risk-taking is also closely associated with a certain approach to investment in future returns [29]. This is made even more explicit in Gregersen's acknowledgement of capitalist 'successes as the secular equivalent of salvation. Material success is a goal that requires a

willingness to bank on risks as well as the obvious parallel between faith in the providence of the hand of God and its secular replacement, Adam Smith's 'hidden hand of God' through the market [24].

Here we return to a well-rehearsed critique of traditional sociological approach to risk theory. As Ruth Levitas has argued, the risk thesis of Beck and Giddens has always assumed a discourse that places the future in 'calculative relation to the present' to the extent that the hopes or fears for an uncertain future are couched almost entirely in terms of the failure or success of our investments: "Normality is the luck of avoiding victim-hood, or being well-compensated; dystopia is finding your insurance premiums have lapsed…it is in fact the standard discourse of capitalism, in which it is a matter of luck and market forces who are winners and who are losers." [30]. It isn't hard to see parallels with the doctrine of predestination, included in Gregersen's analysis of the establishment of a Lutheran approach to risk-taking (though less extreme in its conclusions than utilising Calvin as his exemplar would have been). The result in either case is an abandonment of the *utopian* element of risk awareness with which the actions I described above are engaged. The Reformation theology version, alongside its capitalist secular counterpart, encourage a sort of risk-investment on the promise of an eschaton without grounding in the desires of present struggle. Whether a salvation outside this world or an eternally deferred payment of capital investment, such risk-taking represents what Philip Goodchild calls the *heretical* eschatology of money as indebtedness [31].

With these reservations in mind, we can return with greater clarity to the ethical task at hand: exploring what 'reasons' activists may call upon in legitimating direct action in the face of radical uncertainty. Risk-willingness is understood as the commitment of ethics to a future that is both envisaged through its participants (and thus not guaranteed by a constantly deferred eschaton) and yet not undermined by the 'wait and see' ethos of wary predictions (and imaginations) of catastrophe. In the hackneyed political cliché taken from Ghandi, the new ethic might simply be the imperative to *be the change you wish to see in the world*. What resources do we have to nurture such a stance? We might begin with Hans Jonas' search for a new maxim based not on utopian *hubris* but the reasonableness of valuing the 'unconditional duty for mankind to exist' [32]. A mix of Heideggerian care towards the future and neo-Kantian imperative of duty in the face of uncertainty, this position starts with the imperative to *imagine* human life continuing (acting 'as if') and secondly *acts* in accordance with the ethical principle that maximally achieves this to the best of our knowledge. Jonas thus rightly criticises the logic at the root of Pascal's wager on eternity (and Gregersen's tentative appraisal of it). For Pascal ignores the true extent of that which is 'available' to lose in the hypothetical wager. In banking everything (one's life commitments) on the possibility of the infinite, one "bears the risk of *infinite* loss" [32, p. 38]. Jonas' departure from *this* sort of risk-willingness therefore confronts the central challenge of the calculability of risk in relation to an ethics of commitment. Given radical uncertainty with regard to the future, even the discourse of the 'no return' bears the ethical

imprint of responsibility through the choice to act or not to act. What remains permanently and agonizingly *uncertain* in action is the certain returns of one's actions. What really makes activism difficult (and requires it to have faith) is the absence of any guarantee that paradise will be regained for me, in this life, or even for my grand children. The reorientation of ethics required is thus once again one of time horizons: can we act in the interests of a future we might not even be able to imagine?

5. Conclusions

The emerging political action movement I have been describing above represents a grass-roots affirmation of such a risk-taking in the public sphere in more ways than one. First, the attempt to empower people to take direct action on an issue infamous for generating feelings of disempowerment and isolation ('what can one person do?') breaks through such disconnectedness. Monbiot's wry observation with regard to climate campaigning, that 'no-one has ever rioted for austerity' is here challenged [33]. Climate campers and activists did almost exactly that: they unified a diversity of political concerns through a popular demonstration that 'less can be so much more' [19]. Second, risk-taking is implicit to direct action (for the practical reasons listed above: arrest, imprisonment, police violence) because it challenges fundamentally the legitimacy of state practices and as such the boundaries of legality and acceptability of normal modes of civil participation. But third and by far the most intriguing risk-element of direct action is that it can bypass the calculative attitude of acting upon the security of returns of its 'investment'. Despite the rhetoric common amongst protesters that their actions are the 'only options available' this is almost always untrue. Courses of action are *chosen* above others (the choice to do nothing is of course always a 'live' option, to use William James' concept [34]) as statements not only about what can change but about what one actively refuses: one resists before the certainty that resisting will cause its target to disappear.

The rationale of climate change activists can realistically be seen as acting upon beliefs that simultaneously cross, lament, resist and anticipate multiple tipping points as they appear and disappear throughout scientific discourse and public awareness. If, as Martin Luther King famously put it, there is 'such a thing as being too late', we should at very least be critical of who, and with what authority, will finally tell us that this moment has passed, and what will be required of us when that happens. For both individual and collective action in essence anticipate a range of calculable and communicable consequences of climate change in spite of the rhetoric of *disaster as failure*. There is a very practical element here: will a discourse of the too late prevent us from acting to alleviate some of its worst consequences of climatic disaster (humanitarian aid) because we have become obsessed with averting a more apocalyptic 'point' in history and failed? A shift in ethical foundations may in such scenarios be preferable. As Mark Charlesworth has suggested, in a personal correspondence,

this may be from a utilitarian and broadly approach to that of virtue ethics, in which care may prevail with much greater effect on the ground. In some cases the action may well be seen as a form of anticipation of that challenge itself.

How does a dialogue with theological categories aid this search for 'more than rational' reasons to act? We have seen that the 'uncertain' nature (extent, timing, definition) of climatic irreversibility requires that we risk action and 'commit forgiveness'. As Arendt puts it "only through this constant mutual release from what they do can men remain free agents, only by constant willingness to change their minds and start again can they be trusted with so great a power as that to begin something new" [21, p. 240]. Without the prior commitment, in theological terms, humans are bound permanently to their sins. This must occur independently of an attitude of certainty with regard to what kind of redemption, or salvation, one is permitted to anticipate. This is not the place for such a confident eschatology. And if category of forgiveness opens up this 'active' element of an engaged ethics of uncertainty, that of *guilt* also warrants investigation. For admitting *culpability* for sins committed is really only the other side of the coin of an ethics of forgiveness. An ethics of the future that admitted climate guilt might indeed generate a discourse of *conversion*. The powerful social potential of this category has already crossed boundaries of theological and political discourses before, for example in the anti-nuclear 'plowshares' movement both in Europe and the US. The effective use of Isaiah's call to arms conversion, turning 'swords into plowshares' might just as effectively be used in reference to the positive adaptation of fossil-fuel dependent practices into sustainable alternatives. And this would also implicitly represent action in faith in the possibility of the new.

Neither blind faith nor shrewd calculation is required when we approach the point of no return. The alternative is to commit oneself first in faith that the uncertain goal – the continuing flourishing of human life – is a good one. The struggle against climate change, we might extrapolate from Jonas, "forbids us precisely to incur the risk of nothingness, that is, to allow the presence of its possibility among the chances of our choice… Nor does it pit what is essentially unknowable and even beyond imagination against the knowable or imaginable objects of choice, but rather sets the totally *unacceptable* over against the more or less acceptable *within* the imaginable finite itself….it commands on the basis of a primary duty to opt for being and against nothingness." [32, p. 38]. In other words, neither blind faith nor shrewd calculation is required when we approach the point of no return. The alternative is to commit oneself first in faith that the uncertain goal – the continuing flourishing of human life – is a good one.

Acknowledgement

This paper draws upon some initial findings of a new interdisciplinary research project, in Manchester, *Future Ethics: Climate Change, Political Action and the Future of the Human* (www.manchester.ac.uk/FutureEthics).

References

[1] T. Lenton, H. Held, E. Kriegler, J.W. Hall, W. Lucht, S. Rahmstorf and H. Joachim Schellnhuber**,** P. Natl. Acad. Sci. USA, **105(6)** (2008) 1786.

[2] G. Walker, Nature, **441** (2006) 802.

[3] M. Lynas, *Six Degrees: Our Future on a Hotter Planet*, Fourth Estate, London, 2007, 33.

[4] M. McCarthy, The Independent, **February 11** (2006), available at http://www.independent.co.uk/environment/article466187.ece.

[5] ***, *Warming expert: Only decade left to act in time*, MSNBC News Service, **14 September** (2006), available at www.msnbc.msn.com/id/14834318/.

[6] G. Schmidt, *Runaway Tipping Points of No Return*, Real Climate, **5 July** (2006), available at www.realclimate.org.

[7] T. Glavin, *The Sixth Extinction: Journeys Among the Lost and Left Behind*, Thomas Dunne, New York, 2006, 1.

[8] Scientific Expert Group on Climate Change and Sustainable Development (SEG), *Avoiding the Unmanageable and Managing the Unavoidable*, United Nations Foundation/The Scientific Research Society, Washington, 2007, 1.

[9] U. Beck, *Risk Society: Towards a New Modernity*, translated by M. Ritter, Sage, London, 1992, 21.

[10] J. Jowit and R. McKie, The Observer, **30 December** (2007), available at www.guardian.co.uk/environment/2007/dec/30/climatechange.carbonemissions.

[11] F. Ewald, *Two Infinities of Risk*, in *The Politics of Everyday Fear*, E. Massumi (ed.), University of Minnesota Press, Minneapolis, 1993, 221.

[12] A. Ganapathiraju, *Pushing the Tipping Point for Climate Change*, The Daily of the University of Washington, **31 January (**2008), available at http://thedaily.washington.edu/2008/1/31/pushing-the-tipping-point-for-climate-change/.

[13] H. Damon Matthews and K. Caldeira, Geophys. Res. Lett., **35** (2008) in print.

[14] G. Monbiot, The Guardian, **21 August** (2007), available at www.guardian.co.uk/commentisfree/2007/aug/21/comment.transport.

[15] G. Ereaut and N. Segnit, *Warm Words: How are we telling the climate story and can we tell it better?*, Institute for Public Policy Research, London, 2006, 8.

[16] C. O'Brien, Earth First! Journal, **28(1)** (2007) 1, available at http://www.earthfirstjournal.org/article.php?id=323.

[17] ***, available at http://www.indymedia.org.uk (accessed 15/04/2008).

[18] J. Garvey, *The Ethics of Climate Change: Right and Wrong in a Warming World*, Continuum, London, 2008, 152.

[19] ***, available at http://www.climatecamp.org.uk (accessed 15/04/2008).

[20] B. Adam and C. Groves, *Future Matters: Action, Knowledge, Ethics*, Brill, Leiden, 2007.

[21] H. Arendt, *The Human Condition*, 2nd edn., University of Chicago Press, London, 1998.

[22] C.R. Sunstein, *Laws of Fear: Beyond the Precautionary Principle*, Cambridge University Press, Cambridge, 2005, 13.

[23] S. Haller, *Apocalypse Soon? Wagering on Warnings of Global Catastrophe*, McGill-Queen's University Press, London, 2002.

[24] N.H. Gregersen, Ecotheology, **11(2)** (2006) 137.

[25] U. Beck, *Risk Society: Towards a New Modernity*, translated by Mark Ritter, Sage, London, 1992.

[26] A. Giddens, *Consequences of Modernity*, Polity, Cambridge, 1990.
[27] N.H. Gregersen, *Risk and Religious Certainty: Conflict or Coalition?*, 8(1) (2004) 27.
[28] B. Pascal, *Pensées [1670]*, Texte de l'édition Brunschvicg, Éditions Garnier frères, Paris, 1958.
[29] M. Weber, *The Protestant Ethic and the Spirit of Capitalism* [1930], Routledge, London, 2001.
[30] R. Levitas, *Discourses of Risk and Utopia*, in *The Risk Society and Beyond*, B. Adam, U. Beck and J. Van Loon (eds.), SAGE, London, 2000. 198.
[31] P. Goodchild, Ecotheology, **9(2)** (2004) 151.
[32] H. Jonas, *The Imperative of Responsibility: In Search of An Ethics for the Technological Age*, University of Chicago Press, London, 1984, 37.
[33] G. Monbiot, *Heat: How We Can Stop the Planet Burning*, Penguin Books, London, 2006, 42.
[34] W. James, *The Will to Believe and Other Essays in Popular Philosophy [1896]*, Longman, Green and Co, New York, 1923, 3.

,