CLIMATE CHANGE:

THE NEED FOR A HUMAN RIGHTS AGENDA WITHIN A FRAMEWORK OF SHARED HUMAN SECURITY

Des Gasper[1]

International Institute of Social Studies (The Hague),

Erasmus University Rotterdam, Netherlands

Pre-final version of a paper which appeared in *Social Research: An International Quarterly of the Social Sciences*, vol. 79, no.4, pp. 983-1014.

[1] P.O. Box 29776, The Hague, Netherlands, NL-2502 LT. I would like to thank Johan Hattingh, Asuncion Lera St.Clair and Sakiko Fukuda-Parr for helpful advice.

INTRODUCTION

John Holdren, President Obama's Director of the White House Office of Science and Technology Policy, has described humankind's current approach to climate change like this: 'we're driving in a car with bad brakes in a fog and heading for a cliff. We know for sure now that the cliff is out there, we just don't know exactly where it is. Prudence would suggest that we should start putting on the brakes' (quoted by Friedman 2009, 160). Holdren does not appeal to a precautionary principle of seeking to avoid or cover against an unlikely but possible major danger. The coming troubles are now relatively certain if we continue on the present course. In the words of for example UNESCO's advisory World Commission on the Ethics of Science and Technology: 'What is already unequivocally known about global climate change is that it poses a risk of ethically unacceptable harm which is uncertain only in terms of magnitude and timing.' (COMEST 2010, 29).[2] If we can speak of humankind in the way that we do of an individual, then the appeal is rather to a principle of non-psychosis, of avoiding self-wounding. However, in the climate change situation those who are driving might not be those who will go over the cliff; most of the victims and especially most of the worst affected will be, as it were, low-income persons who are riding insecurely on the bumpers and the car roof, and especially their children and grandchildren.

The World Commission itself used another analogy that goes beyond the precautionary principle, to reflect that the world faces not just a small chance of distant disasters but imminent certain and serious damage, at least for many people, if we do not change course.

> [While] it would not be reasonable to expect someone who cannot swim to rescue a child drowning in the heavy swells of a rough sea…we would find it ethically reprehensible if a well-trained lifeguard, who knows how to brave such conditions and has the equipment to do so, refused to come to the rescue and merely stood by as the child drowns. …We would find it equally reprehensible if the lifeguard did not act on the grounds that (a) he was waiting for better equipment to arrive, (b) he would compromise his economic position by being late for his night job, (c) he would not take action unless someone else assisted him, or (d) he was awaiting specific instructions to intervene. (COMEST 2010, 33)

Massive human rights violations are now in the pipeline, as product of ongoing anthropogenic climate change which will destroy many people's livelihoods, and from its (non-)treatment and understatement both in mainstream politics and mainstream policy analysis such as even the World Bank's *World Development Report 2010* and the Stern Review (Stern 2007; IPCC 2007; Hansen 2011). The well-to-do of the world—who have generated the problem—act like the lifeguard, in other words they largely fail to act,

---

[2] Is the danger real? Brown (2012) cites two recent surveys of expert opinion. First:

> 'a 2009 study--published in the Proceedings of the National Academy of Sciences of the United States--polled 1,372 climate researchers and resulted in the following two conclusions. (i) 97-98% of the climate researchers most actively publishing in the field support the tenets of ACC (Anthropogenic Climate Change) outlined by the Intergovernmental Panel on Climate Change. (ii) The relative climate expertise and scientific prominence of the researchers unconvinced of ACC are substantially below that of the convinced researchers. (Anderegg et. al 2010)'.

Second, he cites an even larger poll from 2009 which gave very similar results (reported in Doran and Zimmerman 2009). See also 18 statements from national scientific associations, assembled at http://www.ucsusa.org/ssi/climate-change/scientific-consensus-on.html.

citing all the reasons above and others. Often the lifeguard is preoccupied with his PlayStation.

Somewhat better than Holdren's analogy, the situation we face might be compared to that of a fleet of supertankers, on autopilot, heading towards a waterfall. The declared strengths of the capitalist market economy—that it has no need for a central authority and no need for good will in order to achieve good results, thanks to its ability to constructively mobilize everyone's energies—may become dangers when dealing with a different challenge than how to expand production. When the market economy's categories exclude vital factors they can lead to a style of: 'Approaching Hazard – Full Steam Ahead!'. Similarly, the virtues of the dispersion of authority in a world of nation-states—that each country can use its local knowledge, traditions and values, for prompt, relevant and locally acceptable management of its own affairs—can become dangers when dealing with webs of interconnection that drastically transcend national boundaries, such as the linkages in the earth's climate system.

In this situation we cannot expect a rapidly negotiated or commanded reorientation. We first require ethical and policy languages that can help to motivate and coordinate diverse efforts worldwide. We need a wake-up call, an alarm bell and mobilizer of concern. Human rights philosophy offers such a language, and is well-suited in many respects – it is familiar, forceful, and universally understood. It can convey the wrongness of harming others, which is central in this case, where consumers and producers of greenhouse gases bring damage to others worldwide. Its cosmopolitanism, the concern with all people everywhere, makes it adequate to the reality in which individuals and agents around the world, not only states as blocs, affect other people around the world. A human rights formulation such as Henry Shue's language of basic rights also conveys the priority to respect basic needs fulfilment for all. Its forcefulness makes it an appropriate stage-setting language; and its universal comprehensibility allows it to serve as a medium of cross-group and cross-national communication and collaboration.

But suppose, further, that the waterfalls span only part of the river and that some oiltankers think their sailing path is favourable, so that it will not be they that plunge over the falls. In some countries and some important social echelons a perception rules that 'we' will be safe, even if others perish. True, 'even a 2 degree rise in average temperatures will have catastrophic effects for populations living on small islands, large river deltas, or other low-lying areas' (COMEST 2010, 36). But these are people whom we can, by various devices, avoid thinking about.

Suppose too that various of the tankers imagine that through rapid technological innovation they will transform into tanker-airplanes that will be able to fly before arrival at the falls. Prevalent in the contemporary world is a vision of endless economic growth based on a magic of the market and a technological wizardry that together will save us from all evil.

Human rights philosophy in defence of the likely victims of climate change must somehow help counteract these three major mirages or temptations: first, the warm nest of national identity conceived in such a way that we see ourselves as separate from, even immune to, the misfortunes that may beset much of the rest of the world, and such that if 'we' expect to be safe, we rest indifferent to the fate of others; second, the dream of growth, economic and technological, that will enable us—whether defined as particular

national tankers or particular affluent groups and persons—to soar upwards and avoid the waterfall; and, third, our ability to screen out unpalatable information or questions, such as about the fate of 'marginal' groups, those in the islands, deltas and other physically or socially exposed locations.

Unlike in the instructive and inspiring case of the campaigns against slavery and the slave trade, the convoy must brake and change course not through a century-long struggle, but by radical action within the next two decades, climate scientists warn us. The campaign in Britain against the slave trade in the late 18th and early 19th centuries, an era of great public championing of philosophies of liberty, still took over fifty years to achieve a change in legislation; perhaps not surprisingly when confronting a practice which had thrived for centuries. Many more decades were required to implement the legislation, move against slavery itself, and act not only in Britain but around the world (Crawford 2002).

Is traditional human rights discourse strong enough for mobilizing active goodwill and cooperation of the scale now required? Is it a sufficient framework, given its own individualistic and legalistic character (Gasper 2007, 2009a, 2012)? Canada's recent walkout from the Kyoto Protocol, for example, reflects not an outright rejection of ideas of human rights, but in effect a rejection or lack of a picture of shared human fate and interconnectedness on Planet Earth. The warm nest, the focus of loyalty, is the nation. Rights of each person are considered as rights within and duties of the nation. Others outside my nation implicitly fall outside the moral community. To paraphrase the British Prime Minister Neville Chamberlain speaking in September 1938: ´How horrible, fantastic, incredible it is that we should be talking about reducing consumption and changing our lifestyle because of supposed problems in a far-away and future country populated by people of whom we know nothing.'[3]

The equation of the subject of human rights with the present-day citizen within the nation-state has become (even more) obsolescent in our intensively causally interconnected globe. Correspondingly, human rights thinking requires re-articulation within a human security perspective, that considers the human species, its planetary habitat, its vulnerabilities and fears and causal, emotional and moral interconnections, in a perspective of its evolution and unguaranteed perpetuation over generations and millennia (CHS 2003; Brauch 2007; Picciotto 2007; UNESCO 2008). To respond to the challenges of global climate change, traditional human rights formulations remain appropriate goals but are not a sufficient set of instruments.

The paper looks first at the temptations and mirages: the warm nest of the nation, the dream of problem-transcending growth, and the visionless vision of overlooking the weak, ignoring the marginal, and excluding the Other; and second at the human rights agenda's vital contributions, but why it is insufficient, and at the value-added by formulating and pursuing human rights within a vision of shared human security.

[3] 'How horrible, fantastic, incredible it is that we should be digging trenches and trying on gas-masks here because of a quarrel in a far-away country between people of whom we know nothing', said Chamberlain in reference to the dispute between Czechoslovakia and Nazi Germany (http://en.wikipedia.org/wiki/Neville_Chamberlain; consulted 1 June 2012).

DIAGNOSIS – I: THE WARM NEST OF THE NATION

In December 2011 the Canadian government walked out of the 1997 Kyoto Protocol, under which it had agreed to reduce by 2012 its greenhouse gas emissions by 6% compared to 1990 levels. Its emissions had instead risen by 24%. Citing the costs to each Canadian citizen of 'following Kyoto', a country that in the late 1990s had championed principles of Human Security in foreign policy abandoned its earlier commitment rather than in effect pay for its non-fulfilment by having to buy carbon credits to cover its excess emissions. Put differently, the costs inflicted on others, including future generations and people outside Canada, would be ignored and not paid for by the present-day Canadian producers and consumers who were responsible for them. The principles cited by Canada in its era of human security advocacy before 2006, when it sought a distinctive international profile and legitimacy—principles of interconnection, mutual respect, responsibility for the effects of one's actions, and contribution in light also of one's response-ability—were abandoned.

Canada is not unique in such behavior. Saudi Arabia, a proselytizing power for a great universal religion, is also a shame-free obstructer of carbon controls. But Canada's U-turn was particularly shocking, perhaps since expectations are higher for democratic states. Dani Rodrik (2011) warns us though of the tensions between nationalism, democracy, and economic globalization. A country may be able to uphold any two of these, but faces difficulty to maintain all three. Prior to full-blooded economic globalization, European economies could combine nationalism and democracy. The present-day tribulations of the European economic union suggest that its members need either to pool sovereignty, moving beyond nationalism except on the sports field, or to reduce their exposure to economic globalization.

Canada's example, amongst others, suggests we need to extend Rodrik's analysis to include a fourth principle, even harder to combine with the forces of nationalism, democracy and globalized markets: environmental sustainability and the interests of future generations. Canada's Kyoto walk-out was an expression of democracy, responding to voters' expressed concerns, while seeking to cope with the competitive pressures of economic globalization; within a nationalist frame, for the voices that are expressed and counted are only those within the national nest. It was a rejection of sustainability. To pay attention to climate damage would mean paying attention to the interests of the present and future generations affected by Canadian emissions. Both of these groups are 99.6% non-Canadian. The future, too, is seen as another country; or even the future generation Canadians are seen—in the view from the nest but probably wrongly—as better served by being richer, regardless of the costs inflicted on others worldwide, since by being richer they can supposedly protect themselves against both climate change and the harmed foreigners.

As yet, countries like Canada do not feel much connection, moral or causal, to the global South. Northern fishing fleets have ignored fishing limits and exhausted fisheries off Southern shores, for example in Senegal and off the Cape of Good Hope, removing the livelihoods of local fisherpeople whose small boats cannot compete. These impacts are not noticed in the North, or are treated as like any market competition for resources or customers. In the case of climate change, the degree of mental and moral alienation is yet stronger: it is exacerbated, as Gardiner (2011) underlines, by the plurality of agents who

contribute to such effects and the wide dispersion of the effects of one's actions in space and in time. The effects fall not only on people far distant in identity from the perpetrators, on people who are not part of 'us' and not objects of moral loyalty, but who are not even perceived or individually identifiable. There are innumerable agents and innumerable victims.

In such an impersonal alienated arena, relationships become like those of the global market: one is held responsible for damage only when a law protects those who are damaged and it can be enforced.

> The US government (and corporate) position in discussions on climate change … implicitly applies a market mentality …. Damage to others need not be culpable in a market framework, if not produced by direct assault or breach of a law. In fact the doctrine of competition demands that one try to inflict damage on competitors and indirectly on their employees and suppliers. … As with a corporation found to be polluting a common resource and hence indirectly damaging others, the defence may be offered that no one has property rights over the common resource. Therefore those who have broken no law and who only indirectly and unknowingly may have harmed others are, supposedly, non blame-able ('blame' originally means 'to speak ill of'). Within a defensive individualistic world-view, no blame means no responsibility for redress. (Gasper 2005, 17)

The very term 'the environment' is indicatively inadequate, suggests Kovel (2007). It means that which is external – the sink into which Man dumps wastes. 'Ecology' is a more adequate term, for it suggests interconnections. Ecological consciousness considers: nature-nature connections; human–nature connections and the mutual constitution of people and nature; and human–human connections and mutual constitution. The national nest's status as an isolated moral universe relates to a perception of it as a substantially causally isolated universe, a perceived ontological separation from 'the environment', meaning in this case the other countries or parts of the world upon whom one rains wastes. Moral indifference reflects not only lack of sympathy but lack of attention, which reflects and reinforces the mental structuring of identity.

Self-concerned nationalism in the context of global public goods leads to the sorts of disaster explored by game-theory. The use of a *national* framing of issues and of solutions also reinforces the policy stasis on climate change because it contributes to inattention to high-emitters in low-income countries, which reduces the willingness of high-emitter countries to act. As Harris (2010) observes, the affluent classes in middle-income and fast-growing low-income countries like China, Mexico, Brazil, India and Indonesia now account for a large share of global emissions, and there is no ethical case for not including them in a system of obligations.

The intensity of resistance to climate change related obligations in the USA in particular has, however, deeper causes. The exceptional amount of climate change denial, for example, demands examination. One factor may be the psychological extremity of the implied threat to people's present life-style and self-image. Climate change is a counterpart case to slavery, but without the same time available to sort it out. Appeals to principles of human rights may have little immediate impact. The disconnect of much of the general American and Canadian public from adequate reporting of the scientific information and from careful ethical debate of the issues arising reflects many factors in addition to academic involution, and seems unlikely to change quickly, given current

structures of power and identity and thus of allocation of attention. Basic worldviews that structure attention may only evolve gradually. Correspondingly, one can posit for most Americans and Canadians that only when they perceive global warming as being of direct major harm to them is rapid change in their stance probable. Perhaps corporate America's world-wide interests and calculations about global interconnection will help such an evolution eventually. At present however, many powerful groups in the USA and Canada feel that they may even gain from global warming; for example, through longer growing seasons, navigability of the Arctic, and access to mineral wealth beneath the Arctic Ocean. A contribution of human security analysis is that it can widen the field of attention and the awareness of global interconnections by important elite groups—corporate, military and political—in ways that could counteract insouciant and unenlightened forms of self-interested stance (CNA 2007; Campbell et al. 2007; Moran 2011). Damage done to others will not remain quarantined far away.

Whereas liberals focus relatively more on issues of harm and fairness, conservatives concentrate more on in-group loyalty, authority/respect and purity/sanctity, suggests some moral psychology research (Haidt & Graham 2007). Unless one appeals to conservatives' self-interest and group-interest, one may not have much influence on them. Richard Schuhmann (2010) extends this line of analysis. To appeal to US conservatives one needs to refer to what they care about, especially implications for the USA, not for Bangladesh or Africa. Of particular relevance could be, first, attention to the increased frequency and intensity of extreme weather events. Conservative Americans feel well protected against general warming or even welcome it, but are sensitive to Katrina type events that overwhelm normal protection even in the USA, and they can foresee the possible destabilizing impacts of similar events in poor countries. Second, one should highlight opportunities for the USA in the march to 'the green economy'. Third, one may point to potential win-win paths that reduce emissions while increasing well-being, especially as compared to the alternative of eventual crisis, and in some cases also offering ways out of current lose-lose ruts of a consumerist life-style (see e.g. Segal 1998 on commuting patterns and time budgets). Fourth, some conservatives are sensitive to arguments about future generations and the accusation of inter-generational buck-passing. Conventional rates of time discount imply a drastic downgrading of the interests of one's grandchildren, and of their grandchildren, and are justified only if high economic growth can continue indefinitely, in other words only if the natural environment sets no limits.

Thomas Friedman of *The New York Times* essays all these steps in his book on climate change for the general US audience, *Hot, Flat and Crowded*. He tries to make US conservatives think about climate change in the way German conservatives do: as a great business opportunity. He too assumes that high economic growth can continue indefinitely.

DIAGNOSIS - II: THE SONG OF GROWTH

Friedman, like most mainstream authors (e.g., World Bank 2009; Stern 2010) is explicitly committed to endlessly ongoing economic growth in rich countries, not only the project of economic development in presently poor countries. He emphatically believes in continuing economic growth as still potentially welfare-giving in a country as wealthy as the USA. Authors like Stern are more reticent here, but see growth as at least politically unavoidable. Stern declares that, to get political support for any national or international deals on climate, growth must be seen to go on and on. This forces his and similar projections of the required cuts in emissions-intensity (the volume of greenhouse gases [GHGs] generated per unit of national or global output) to become so ambitious: 80% cuts worldwide by 2050 (Stern 2010, 41), merely to not exceed a GHG level of 500 ppm (parts per million), far higher than most climate scientists now consider safe. Using a similar projection, the *World Development Report 2010* yet asserts that 'there is no reason to think that a low-carbon path must necessarily slow economic growth' (World Bank 2009, 7) – *no* reason.

One underlying factor, says Tim Jackson's book *Prosperity Without Growth*, is the structure of our contemporary capitalist economies. Zero or negative growth is likely to mean more unemployment, loss of government revenue, increase of social security payments, budgetary crisis and possible generalized economic crisis. As on a treadmill, one must keep running in order not to be swept away. There are ways to redesign the economic structure to avoid this bind. The agitation engendered by such discussions of ever phasing-out growth is so great however that various authors posit in addition underlying political, psychological and cultural sources: there is a 'social logic' of permanent growth as well as an economic treadmill (Gasper 2009b). The past two generations have seen the emergence around the world of numerous individuals who define themselves through new purchases, and of producers who rely on ever new cycles of this process (Jackson 2009; Hamilton 2010).

Friedman displays that zeal for growth. The word seems to function for him as a talisman of the good; he keeps repeating it. We must keep 'innovating better ways to drive growth with fewer and fewer electrons' (p.232) and 'find a way to create wealth—because everyone wants to live better—without creating toxic assets in the financial world or the natural world that [will] overwhelm us', says Friedman (2009, 9). We must have more: we want it, and, by assumption, economic growth is the only way for even rich countries to live better. That more is always wanted suggests though the emptiness of much of what is already possessed.

Friedman's journalistic ear is attuned to more than one song. Within his book's 500 pages one finds frequent appeals to the can-do spirit of U.S. engineering, the magic of the market, and American nationalism. At a few points though he notes that 'Without an ethic of conservation…the availability of abundant, clean, reliable, cheap electrons would turn into a license to rape our natural world', an intensified orgy of consumerism (p.236); without a love of nature, money values alone will never bring conservation (p.370). And deeper, without our *paying attention* to nature, being aware and appreciative, none of the other policy tools will suffice (p.372). Yet he soon returns to: More, More, More – the goal of an 'environment in which you, your company, and your community are constantly thinking about how to generate more growth, more mobility,

more housing, more comfort, more security, more enjoyment, and more packaging [*sic*] from the most innovative use of the cleanest electrons and fewest resources' (p.380). The chant connects to his nationalism: greening is presented as 'the best way to re-energize America, rebuild its self confidence and moral authority' (p.391).

Often, economic growth is presented as an essential part of modern identity: the source of hope, meaning, and self-profiling, at the level of individuals and especially of nations (Gasper 2009b). It becomes the token of national strength, virility and vitality, 'the symbol of life itself' (Hamilton 2010, 64). 'Growth is the name of the game', in the words of former US Secretary of State and Secretary of the Treasury, George P. Shultz (interview on CNN, 14.11.10). Arguably it becomes a channel for religious feeling, a source of ultimate orientation that cannot be questioned; 'religious value seems now to be invested in the most profane object, growth of the economy, which at the individual level takes the form of the accumulation of material goods' (Hamilton 2010, 33).

This accumulation is supposedly so important that some months of foregone economic growth outweigh the benefits of stabilizing the climate, or so we may infer from the practice of certain leading economists. The 2007 IPCC report's maximum estimate for the cost of reducing emissions to 450 ppm CO_2-equivalent in 2050 was 5.5 % of world GDP. 'Most models show lower costs' (Hamilton, 2010, 50). Of course the resources to be mobilized must pass through some organizations' budgets and be ceded by others, and represent enormous sums, but Hamilton puts them in perspective. The IPCC maximum estimate is equivalent to around two years' foregone growth, foregone in order to greatly reduce the chance of disaster. In the case of the Stern Review, prepared for the UK Government, the estimates for achieving 450 ppm and avoiding destabilizing the world climate equated to a bit over a year of foregone growth. This was judged to be too expensive. 'It is acceptable, according to Stern, to ask people to wait an extra five months for their incomes to double but it is too much to ask them to wait a little more than a year' extra (Hamilton, 2010, 54). Taking serious additional risks with our future (mainly the future of later generations), by instead going up to 550 ppm, was deemed the proper balance.

The leading climate economist William Nordhaus calculated that market valuations imply that the economically optimal path will be 'to set the global thermostat at 2.6 degrees C [warmer] for the end of this century, rising to 3.5 degrees C [warmer] by 2200' compared to pre-industrial levels, whereas most climate scientists think that this seriously risks catastrophe, notes Hamilton (2010, 61).[4] According to Hamilton, Sterna and Nordhaus's sort of economic cost-benefit approach to climate policy is part of a conception in which humans are seen as 'radically separated from the world around them, and can therefore regard it [exclusively] as a realm that provides goods and services for human benefit' (Hamilton, 2010, 54). Earth's climate system is seen as 'like a central heating system that can be smoothly adjusted to a desired temperature' (p.62). The complexities and sensitivities of the climate system, including various potentially disastrous feedback loops, make this conception crazily inappropriate according to many scientists. The gulf between the approach of some leading economists and that of apparently the majority of climate scientists seems disturbingly wide.

[4] Hamilton cites the survey reported in http://www.independent.co.uk/environment/climate-change/climate-scientists-its-time-for-plan-b-1221092.html

The *World Development Report 2010* on climate change presented the Stern Review as on the pessimistic side, even though most of its assumptions had already proven too optimistic. The 2010 Report used economic cost-benefit analysis as a guide, and respectfully cited Nordhaus's calculations (p.8: Box 3). It added though that these indicate that the extra costs of keeping warming to 2 or 2.5 degrees rather than 3 or 3.5 degrees are relatively small, since reduced adaptation costs would largely offset the extra mitigation costs. 'The results therefore suggest that the cost of precautionary mitigation to 550 ppm is small' (p.8) – less than half a per cent of economic product, which is presented as a reasonable cost for climate insurance.

Mentioned in just one sentence in the *World Development Report*'s huge Overview chapter are an extra three million deaths per year from malnutrition due to crop failures in the business-as-usual scenario that leads to more than 5 degrees warming by 2100 (pp. 4-5). Even in the optimistic 2 degrees warming scenario: 'Between 100 million and 400 million more people could be at risk of hunger. And 1 billion to 2 billion more people may no longer have enough water to meet their needs' (p.5). Such impacts carry little weight in economic cost-benefit analysis when they occur amongst the global poor.

DIAGNOSIS - III: CLIMATE SILENCES

We should note several distinct possible areas of distortion in climate knowledge. One is deafness to inter-personal distribution of costs and benefits, due to the nature of the techniques used; as where economic cost-benefit analysis counts monetized values, ignores people with no money, downplays those with little money and merges the measures of their lives into aggregate calculations which are dominated by the results for people with plenty of money. Human rights principles should give a counterforce here. Second: manipulation of the techniques, due to temptations generated by the volumes of money at stake. Although important, these manipulations are not explored here, as they represent 'mere' abuse of the techniques.[5] We will say more on, third, the treatment of uncertainties and the inter-personal distribution of associated risks, for this is central to how seriously or not we treat insecurity in ordinary people's lives. Much practice reflects again the distorting force of money-power, this time upon the conception of what is good scientific procedure. All the first three areas are linked to a fourth, the restriction of the information collected and circulated about the lives (and deaths) of poor people. We should try to counteract the third and fourth distortions by a human rights approach and in particular by human security analysis: to make us aware of the impacts of different procedures on how much attention is given to basic aspects of the lives of vulnerable people. A human security approach looks closely at who and which values are being secured, and whose interests guide us in responding to risks and uncertainties.

Deafness on distribution

[5] See e.g. the websites of the Stockholm Environment Institute and CDM Watch, on maneuvers used to claim funds under the 'Clean Development Mechanism'. Some projects have, for example, deliberately included increased production of highly damaging emissions (e.g. HCFC-22 and HFC-23), to be able to then claim credits for also including components that reduce these emissions.

Economic cost-benefit analysis of the type practiced by Nordhaus for looking at climate change impacts involves a hardness of hearing to the lives of the poor and of future generations. If the monetary value of estimated benefits along a path, benefits which typically disproportionately accrue to well-off groups, outweighs the monetary value of estimated costs, which typically disproportionately accrue to poorly-off groups, then the path is approved, regardless of whether the poorly-off and disadvantaged groups are compensated. If they are not compensated, then just as when funding for climate change mitigation and adaptation is deemed supposedly too expensive, this 'amounts to harming others for money' (Garvey 2008, 111).[6]

Such use of economic cost-benefit analysis represents extension of the technique beyond its realm of justifiable application. It emerged as already an extension of private sector business calculations into the public realm, and rested on, inter alia, two assumptions: that it was for comparison of relatively modest alternatives that did not involve dramatic transformations that sacrifice some people's lives for gain by already well-off others; and that those who lose from one project will gain from the next, not that some people, notably those with little purchasing power, will be systematically and consistently disadvantaged while others, notably those with ample purchasing power, are consistently advantaged.

Here we were talking about distributions of purchasing power and of project benefits and costs; for example, about which people get displaced from their home or get a high-pollution facility constructed close by. We are interested also in other types of distribution: the distributions of weather variations, in a given year and over the years; the distribution of the associated stresses, over different social groups; and the distribution of scientific and policy attention to these stresses on different groups, where unfortunately the inequalities of purchasing power and associated political power can influence the degree of notice and weight given to the stresses. For example, when risks are treated as calculable and their impacts as monetizable, then in assessments made at an aggregate level the damage done to very low-income people—even loss of their life—becomes of little import and is readily outweighed by other elements in the economic assessment.

The *2010 World Development Report* offered a comforting estimate of the economic impact of prospective climate change, in global aggregate terms: 'a global average GDP loss of about 1 percent' (p.5), if warming is limited to 2 degrees C, the long-discussed maximum 'safe' rise that is now very likely to be exceeded. Besides the likely overoptimism of such an estimate, things look different when seen from Africa and with reference to the jeopardized livelihoods of many low-income people and to the knock-on effects. 'Warming of 2°C could result in a 4 to 5 percent permanent reduction in annual income per capita in Africa and South Asia' (World Bank 2010, 5). Restricting global average warming to 2 degrees C would still mean temperature rises of 4 degrees C in many inland parts of Africa, beyond the limits of temperature tolerance for many of the crops, even in an average year. In addition, the periodic exceptional years, and extreme periods within almost any year, will become more frequent and more damaging. Groups at the Durban COP-17 summit in 2011 protested that Africa-is-Roasting and You-Are-

[6] Some critics of expenditures on climate change mitigation argue that spending on health care offers better returns. But often they campaign not for more health spending but for more consumer sovereignty, in other words allocation as determined by purchasing power.

Cooking-Africa. Archbishop Desmond Tutu and others have spoken repeatedly in recent years of a quiet genocide against the African poor; and warned that 'as climate change destroys livelihoods, displaces people, and undermines entire social and economic systems, no country—however rich or powerful—will be immune to the consequences.' (Tutu, in UNDP 2007, 166).

Deafness on extreme events and extreme responses

Such climate stresses could take some societies outside their bounds of adaptive capacity, as is suggested already by experiences in parts of inland Africa such as Darfur in Sudan. Using a range of sets of assumptions, given the uncertainties, Devitt and Tol (2012) formally model a set of scenarios for Sub-Saharan Africa that explore some likely impacts left out even by IPCC models: how climate change increases chances of conflict, which reduces economic growth, which further increases chances of conflict and reduces ability to adapt to climate change, which further reduce economic growth; and so on. Whereas most of Sub-Saharan Africa presently has rapid growth, some countries are shown to be in serious danger of becoming trapped in poverty and conflict.

Behind the bland aggregations, generalizations and exclusions in economic calculations such as those by Nordhaus and the World Bank, reality is more complex. We must think about climate variability and extreme weather events, not only averages, as the energy stored in the global climate system increases and as some weather patterns become less stable (IPCC 2012). A human security perspective helps us to think about the impacts on vulnerable persons' lives, and to see that even vulnerable people have powers to respond that will affect globally interconnected economic and political systems. People in low-income countries are already far more likely to be hit by environmental disasters—violent storms, flash floods, droughts—than those in rich countries. Poor people in all countries are proportionately more exposed, for they live in the less sheltered and secure locations, and have fewer resources with which to protect themselves or recover.

Some people will be smashed by the intersection of multiple forces and trends, including both gradual decline and extreme events. When Hurricane Katrina struck New Orleans the victims were especially Afro-Americans, poorer people (since they lived in the riskier locations), people over sixty (this group suffered more than 60% of the 1800 deaths), and notably persons who were all of these. Human security analyses look at the vulnerabilities of particular groups in their particular situations and localities, produced by these intersections of diverse factors. Leichenko and O'Brien (2008) show how the groups who are most threatened by environmental changes are often the groups who are also left most exposed by economic changes. They have fewer resources, of all types, to use in protection and recovery and are thus more damaged than other groups by the same exposure and by their actual exposure. Holistic analyses of specific people's lives reveals these combinations of factors and their interactions (O'Brien et al. 2010.)

Some people who are harmed will react, as highlighted by recent work in conflict studies (e.g.: Campbell et al. 2007; Dyer 2010). When normative bottom-lines are felt to have been violated, results can be similar to when a natural threshold is breached: eruption or collapse. One region-by-region world review concludes: 'On the basis of the evidence presented here, it is clear that the most significant consequences of climate change during the next few decades are likely to arise from, or be substantially amplified

by, human responses to natural phenomena whose immediate effects may appear to be relatively modest' (Moran 2011, 8).

The 'risk' of not being precise; versus the question of precisely whose risks?

'Risk' can refer to different things: to calculable variability, which fits nicely into optimizing calculations, or to undesirable effects, which may fall mostly on the weak and hence are too often ignored. Why do even IPCC models leave out what are likely to be 'the most significant consequences of climate change'? Partly because the human responses are less closely predictable than for example the responses of glaciers to increased temperatures. Partly because the modellers consequently feel exposed when presenting estimates about occurrences that, while potentially considerably greater in terms of human significance, are harder to predict precisely. Further, the potential occurrences have huge political significance, for they have implications for the ascribed wisdom and legitimacy of behavior of many current powerholders. Better then, many analysts have felt, to remain quiet about potential impacts on people who lack political weight, rather than rouse the ire of major powerholders and their supporters, who are already incensed by even the estimates of confidently predictable physical implications of global warming.

A similar socio-logic applies in estimating those physical implications. Since the IPCC works by consensus, its conclusions have a conservative bias: they articulate the overwhelmingly demonstrable implications of corroborated quantified models, not also the further, more dramatic but less certain, possible implications of several other major trends. In general, the IPCC, like the rest of the mainstream of climate studies, has not paid much attention to the tails of distributions: the extreme scenarios that seem less likely but would be far more radical, especially for low-income people in exposed locations. Overlapping with this, the IPCC has given little emphasis, including in its 2007 Report, to cases where our knowledge of the exact parameters is shaky. A major example concerns melting of the polar ice-sheets. Part of the difficulty lies in estimating possible 'tipping point' behavior, such as when and how fast would ice-sheet melt accelerate if melting begins to reduce the power of the ice-caps to reflect back solar radiation; and similarly for when a positive feedback is triggered between warming and the release of methane from Arctic permafrost. But: 'Tipping points are usually not included in predictive models because of the difficulties of gauging the degree of nonlinearity of the processes involved and locating the exact position of the tipping points' (van Renswoude et al. 2012). 'The risk of climate feedbacks is generally not included' (Working Group III Report, IPCC 2007, 173).

Besides an epistemic convention—that we don't know enough yet to highlight this issue, though its implications could dwarf those about which we can as yet be precise—has lain also a tactical decision: to avoid a topic so sensitive that it could risk disruption of the discussion and in some places even risk loss of funding (Schneider 2009). Yet zero ice-sheet melt plus zero feedbacks is the least likely case. A fantasy case may become taken as the base-case; precise myths are preferred. Only very gradually have we begun 'to move toward recognizing the dangers of uncertainties in the so-called "fat tails" of the probability distributions of damages … and correspondingly [to] begin to endorse aggressive action as a reasonably priced insurance policy against potential disasters.' (Cline 2007, 86).

Why is this essential move so gradual and so belated? Donald Brown remarks how natural scientists are rarely taught the rationale of their tests and conventions, for example when to require a 95% confidence level. McCloskey has long pointed out the excessive and often misplaced attention given by economists too to statistical significance rather than socio-economic significance (e.g. McCloskey & Ziliak 1996). To demand 95% confidence of a scenario of future large-scale disaster which can be averted by, in relative terms, modest measures is not sensible. Arguably, this happens partly because the risks of harm (as opposed to the risks of imprecision) are frequently disproportionately borne by outsider groups, those who are politically and/or economically marginal. The implicit principle followed is: 'greatest loads for the weakest shoulders'. The ignored extremes of the distributions, and the other silences we have noted, typically reflect the ignored status of the moneyless and powerless.

Human security analysis centres on bringing out the ramifications and human significance of such risks and uncertainties. O'Brien et al. (2010) suggest that the debate on global environmental change has been overly dominated by natural science questions and not sufficiently framed in terms of human significance. The accumulating natural science knowledge often generates more questions not less, and these monopolize attention. We need to think also about which people face known dangers and which ones face the nastier sides of the inevitable uncertainties.

RESPONSES

I: Countering the silences with a human rights agenda

'Human survival and world ethics go hand in hand; it is unlikely that we can have the former without the latter' argues Harris (2010, 193). Human rights ethics is the most known, institutionalized and vivid form of world ethics. It provides a universal language with which to mobilize against exclusionary, marginalising, silencing languages of some systems of power. The Overview of the 2007/8 Human Development Report on climate change thus included strong and repeated messages on 'social justice and respect of human rights' (p.13). It used the term 'human rights' as many as eleven times. In contrast, the Overview of the 2010 World Development Report on climate change, almost identical in length to the HDR Overview, made no use whatsoever of 'human rights', whereas it employed the technocratic term 'climate-smart' nine times. Such is the frequency nowadays of human rights language that a case of its complete absence testifies to fear of its forcefulness.

What is its power? First, it conveys that where fundamental harm is being caused by human action, duties arise to protect, prevent, desist and compensate. The moral implication is not for merely a superogatory, optional beneficence. Harmers have an obligation to not participate in rights violations, to desist and do their fair share to compensate, regardless of whether others are also doing their share; in the same way that, if others are robbing someone who cannot resist, one should decline to participate, plus seek to protect. Currently though, such robbery is being committed against future generations and against already born babies and children who will be alive in the late 21st century.

Second, human rights is a cosmopolitan doctrine that takes ethics discussions out of the insular warm nest of the nation. Instead of focusing on national units, and diverting us into endless disputes over the rights and blame that should accrue to particular nations, it leads us to focus on the violations of basic rights inflicted on many poor persons and to ask how to prevent this (cf. O'Brien et al. 2010). If nations enter climate change negotiations only on the basis of self-interest, little will emerge; negotiations must be conducted also in terms of ethical principle. The attention to unjustifiable harm to individuals provides some of the moral force needed to transcend the motivation to free-ride, something which a state-focused discussion fails to do (Harris 2010, 70-1).

Third, the focus on individuals helps to address the inadequate attention that a framing in terms of national units gives to: the responsibilities of rich persons and rich agencies, not only rich states; the responsibilities also of the rich in the global South; and the difficulties of poor persons in the global North (Harris 2010; Leichenko and O'Brien 2008). Harris notes how these ethical inadequacies of a national framing undermine its motivational force; if rich consumers and polluters in the South too are not included in the moral and policy calculus around climate change the proposals will never achieve sufficient support in the North. Thus: 'cosmopolitanism is more realistic than communitarian state-centred approaches to solving global problems. Because cosmopolitanism is [focused on] persons, it reveals the true locus of pollution causing climate change and the profound consequences of this pollution for billions of people' (Harris 2010, 159). It points to duties for many agents in both rich and poor countries, not only for states in rich countries, and can thus be more effective; also because identification of duty-bearers amongst affluent persons and rich organizations in poor countries renders it fairer and more acceptable to rich countries too. Harris (2010, 160) suggests that: 'States, rather than being the sole practical bearers or objects of cosmopolitan duties and rights, should instead be viewed more explicitly as facilitators of individual rights and duties'. States should find ways to steer and assist rich individuals and agents to do their duty with respect to poor persons; for example through appropriate taxes on climate-damaging luxury activities like air travel.

II: Insufficiency of a classic human rights formulation; arguments for global insurance arrangements

Some weaknesses in human rights based approaches concern insufficient conversion of human rights principles and standards into tools of policy analysis, or choice of inappropriate tools. As we saw, the 2007-8 Human Development Report differed radically from the 2010 World Development Report in its human rights-oriented language of diagnosis and critique. But it differed much less when it turned to policy design to mitigate and counter climate change (Gasper et al. 2011). It relied still on the conventional perspective of economic efficiency, which weights the desires of people in proportion to their purchasing power. It did this out of a feeling of urgent need to present a policy package, which thus inevitably reflected the existing training and networks of its predominantly economist staff including the belief that nice outcomes can be achieved largely through similar market means as contributed to the problem; and out of a wish to maintain acceptance and respectability in relation to some powerful stakeholders. The weakness here is not inherent to a human rights approach; in principle, necessary

additional policy tools could be identified, though some might require longer R&D gestation periods.

Some other possible limitations appear more deep-rooted, and call for innovation and partnerships to enrich a human rights approach. Some concern the typical legalism of such an approach and its degree of applicability for the climate change issue. Others concern whether the human rights perspective sufficiently counteracts the predominant frames of the warm nest of the nation and the song of growth, and thus how strongly it counteracts the attention deficits, the structured silences, in mainstream discussion.

First, legalism. This is a strength of a human rights approach: it seeks to make basic rights enforceable. But a strategy of legal enforcement has dangers too: the huge costs and slow pace of seeking justice via the legal system; possible shrinking of attention to within national boundaries insofar as the legal systems are national; demobilization of popular movements if there is reliance purely on the legal system; and a consequent easy buying-off of campaigns that lack a broad mass-base (like the case brought in 2009 to the UN High Commission for Human Rights by the Republic of Maldives regarding damage to it caused by global warming).

Second, a focus on tort law, seeking to demonstrate exact damage done by party X to party Y, faces many difficulties. Victims of displacement through climate change have no legal protection since the causation is so indirect and complex. Strict liability for the damage caused to others by high-emitters, including in the period before global climate change and its impacts were well established, is arguably ethically appropriate, since the emitters have benefited from what brought harm to others, people who are much poorer than them; but it appears operationally unworkable, since it is too difficult to specify the harms (and the benefits) and too onerous to pursue all the lawsuits (Penz 2010, 166-7).

Penz, Drydyk and Bose (2011) have constructed a complex ethics of displacement in relationship to investment projects. It asks whether a particular displacement is for good development or mal-development, as judged in terms of a set of principles which have become accepted in the international system over the past two generations, including: promotion of well-being and respect for equity, empowerment, and sustainability. And it highlights, refines and applies to these investment projects the principles of rights to: receive good reasons; cost-sharing (not victimization of particular groups through enforcing disproportionate costs on them); benefit-sharing; and participation (Drydyk 2012). Penz et al. think creatively about forms of compensation, which do not only have to be direct per person as in workmen's compensation, but can often more feasibly occur via policies to help a locality, as in support for adaptation, and also via general measures of empowerment.[7]

All this is harder to apply to climate change than to construction of dams or mines. Penz therefore takes a further step. To 'improve the chances that justifiable responsibilities are actually met, and partly to deal with certain difficulties in the justification and realisation of compensation responsibilities, I add the category of "insurance responsibilities". These refer to responsibilities to set up and participate in a global insurance scheme that meets the costs of climate change adaptation.' (Penz 2010,

[7] 'Recognizing the centrality of empowerment will enable climate ethics to interact more significantly with human security approaches, in which discussion of empowerment has been more prominent' (Drydyk 2012: 20).

158). We saw already from Cline the relevance of insurance arrangements to prepare for and share the risks of climate-related disasters, and, from the World Bank, their definite affordability. Penz's work:

> explores various articulations of responsibilities [relevant to climate change], ranging from free movement responsibilities that require states to open their borders, to poverty alleviation responsibilities that require richer states to participate in significant global redistribution, to compensation responsibilities that require greenhouse gas emitting states to accept responsibility for harm done and to provide compensation, and finally to insurance responsibilities that require states to develop and participate in a global insurance scheme that pays compensation, while collecting premiums in accordance with each state's greenhouse gas emissions. The last of these is recommended as the most satisfactory formulation of international ethical responsibilities to those coerced or harmed by climate change, providing compensation for adaptation, whether by migration or in situ adaptation … (Penz 2010, 151)

This offers an operationalizable approach, that adapts the model of workplace insurance. The insurance rationale covers preventive expenditures too—paying for climate-proofing, not only for hospitalization after heat-stroke.

Penz proceeds to specify 'do your fair share' principles for initial levies to set-up the insurance fund. He talks in terms of the contributions of states, not persons. We have seen that such a formulation has ethical flaws; but Penz's ethical logic runs in terms of the rights and duties of persons, for which he then seeks a practicable first operationalization. He moves beyond a conventional tort-law courts-centred treatment, to a global system of collective social security, as befits our global interconnectedness. Second-stage refinements (such as levies from air travel and financial speculation taxes) are welcome but can follow later.

Third, fulfilling this agenda requires a strong motivational basis. The traditional human rights perspective of the rights of the individual may not be enough. Not only are there relevant ethical principles besides human rights, such as principles of utility and due care (COMEST 2010), but a human rights approach in isolation does not fully counter the perspective on nations that supports feelings of separation and lack of connection to 'the rest of the world'; nor does it address the song of growth, the myth that everything can be solved by more economic growth through which we will escape the implications of ecological fragility and a finite globe. Rather than having an ontology of interconnectedness, some versions of rights thinking are ruggedly individualist and stress dignity alone. Besides sensitivity to dignity, we need awareness of human vulnerability and connectedness. A framework of shared human security provides the additional basis of perceptions and commitment required for both enlightened self-interest and solidarity, and thus for the sort of global insurance arrangements that Penz proposes.

CONCLUSION: COMBINING HUMAN RIGHTS WITH A HUMAN SECURITY FRAMEWORK

I have argued that we require ethical and policy languages that are widely recognizable and that can motivate and mobilize worldwide – a set of roles that human rights language plays well. It makes clear that robbery is occurring against already born children and future generations. But I argued further that, for response to the challenge of climate change, human rights language while necessary is not sufficient. We need to extend it into a bigger framework of human security thinking, which more fully conveys what is 'human'—including vulnerability and mutual dependence, connection to future generations and dependence on a global ecology—and encourages us to consider diverse aspects of security and forms of insecurity and to identify ourselves as members of humankind as a 'community of fate'.

By looking at the multiple intersecting forces and events—some of them extreme events—that shape any person's life, this human security perspective enriches understanding and also, potentially, mutual sympathy and awareness of shared vulnerabilities, shared interests, and shared human identity (Gasper 2009a). Attention to the contingencies of life, including extreme events, establishes the need for insurance – preemptive not only palliative. The concern for security is not a language of condescension; it is about ensuring that agents have the basic conditions needed to act and adapt independently.[8]

The human security framework thus supports essential bases for an effective climate change ethics: the feelings of, first, mutual sympathy, concern for others; second, shared human identity; and, third, shared fate (Gasper 2009a). Of these the third, a perception of interdependence and shared interests, may be particularly important. Feelings of sympathy partly depend on feelings of shared identity and of shared fate; and feelings of identity are influenced by who does one feel interdependent with and thus feel as co-members of a community of fate. Dobson notes how awareness of interconnections in the global environment 'thicken[s] the ties that bind us to "strangers", [and] bring[s] these strangers "nearer" without having to rely on empathetically constructing them as surrogate neighbours…' (Dobson 2006, 175-6).

The human security framework has grown out of a concern for individual humans as objects of value and hence as priority foci in thinking about what 'security' activity should try to make secure. It has grown in addition from perception of the myriad interconnections between people and also between threats. One can call this latter perception 'joined-up thinking', which must partner the 'joined-up feeling', the concern and sharing of felt identity, that grows out of and sustains attention to human vulnerability and associated basic human rights (Gasper 2007, 2010, 2012). Put more formally, human security thinking combines a normative ontology of the value of human persons, as in human rights work, and an explanatory ontology of interconnectedness. This provides the basis necessary for climate change ethics and public action.

[8] The Global Environmental Change and Human Security research program (1999-2010) defined human security as where 'individuals and communities have the options necessary to end, mitigate or [sufficiently] adapt to threats to their human, social and environmental rights; have the capacity and freedom to exercise these options; and actively participate in pursuing these options' (http://www.gechs.org/human-security).

REFERENCES

Anderegg, W.; Prall, J.; Harold, J; Schneider, S. 2010. "Expert Credibility in Climate Change." *PNAS Early Edition*. www.pnas.org/cgi/doi/10.1073/pnas.1003187107

Brauch, H-G., et al (eds.). 2007. *Globalisation and Environmental Challenges: Reconceptualising Security in the 21st Century*. Berlin: Springer.

Brown, D. 2012. Ethical Analysis of the Climate Change Disinformation Campaign, at http://rockblogs.psu.edu/climate/, accessed 5 Jan. 2012

Campbell, K., et al. 2007. *The Age of Consequences: The Foreign Policy and National Security Implications of Global Climate Change*. Washington, DC: Center for Strategic and International Studies.

CHS / Commission on Human Security. 2003. *Human Security Now*. New York: UN Secretary-General's Commission on Human Security.

Cline, W. 2007. "Chapter 6". In *Yale Symposium on the Stern Review*, 78-86, http://www.ycsg.yale.edu/climate/forms/FullText.pdf

COMEST. 2010. *The Ethical Implications of Global Climate Change*. World Commission on the Ethics of Scientific Knowledge and Technology (COMEST), Paris: UNESCO.

Crawford, N. 2002. *Argument and Change in World Politics*, Cambridge: Cambridge University Press.

Devitt, C. and R. Tol. 2012. "Civil war, climate change, and development: A scenario study for sub-Saharan Africa." *J. of Peace Research* 49(1), 129-145.

Dobson, A. 2006. "Thick cosmopolitanism." *Political Studies* 54, 165-184.

Doran, P.T., and M.K. Zimmerman. 2009. Examining the Scientific Consensus on Climate Change, *Eos: Transactions American Geophysical Union* 90(3): 22-23.

Drydyk, J. 2012, "Development Ethics and the 'Climate Migrants'." *Ethics, Policy and Environment* 15(3).

Dyer, G. 2010. *Climate Wars*. Oxford: Oneworld Publications.

Friedman, T. 2009. *Hot, Flat and Crowded – Release 2.0*. New York: Picador.

Gardiner, S. 2011. *A Perfect Moral Storm - The Ethical Tragedy of Climate Change.* Oxford University Press.

Garvey, J. 2008. *The Ethics of Climate Change*. London: Continuum.

Gasper, D. 2005. "Beyond The Inter-National Relations Framework: An Essay In Descriptive Global Ethics." *J. of Global Ethics* 1(1), 5-23.

Gasper, D. 2007. "Human Rights, Human Needs, Human Development, Human Security – Relationships between four international 'human' discourses." *Forum for Development Studies* 34(1), 9-43.

Gasper, D. 2009a. "Global Ethics and Human Security." In *Globalization and Security: an encyclopedia*, eds. G.H. Fagan & R. Munck, Vol. 1, 155-171. Westport, CT: Greenwood.

Gasper, D. 2009b. "Capitalism and Human Flourishing?" In *Global Social Economy*, edited by J.B. Davis, 13-41. London & New York: Routledge.

Gasper, D. 2010. "The Idea of Human Security". In *Climate Change, Ethics and Human Security*, edited by K. O'Brien, A. L. St. Clair, B. Kristoffersen, 23-46. Cambridge: Cambridge University Press.

Gasper, D. 2012. "Climate Change and the Language of Human Security." *Ethics, Policy and Environment*, 15(3).

Gasper, D.; Portocarrero, A.V.; St. Clair, A.L. 2011. "Climate change framings, rights and the poor: a comparative analysis of HDR 2007/8 and WDR 2010." Working Paper 528, The Hague: Institute of Social Studies; http://repub.eur.nl/res/pub/26853/wp528.pdf.

Haidt, J., and J. Graham. 2007. "When Morality Opposes Justice: Conservatives Have Moral Intuitions That Liberals May Not Recognize." *Social Justice Research*, 20 (1): 98–116.

Hamilton, C. 2010. *Requiem for a Species – Why we resist the truth about climate change.* London: Earthscan.

Hansen, J. 2011. *Storms of My Grandchildren*. London: Bloomsbury.

Harris, P. 2010. *World Ethics and Climate Change.* Edinburgh: Edinburgh University Press.

IPCC (Intergovernmental Panel on Climate Change). 2007. *Fourth Assessment Report*. http://www.ipcc.ch/ and Cambridge: Cambridge University Press.

IPCC. 2012. *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*. http://www.ipcc-wg2.gov/SREX/

Jackson, T. 2009. *Prosperity Without Growth*. London: Earthscan.
Kovel, J. 2007. *The Enemy of Nature: The End of Capitalism or the End of the World?* 2nd edition, London: Zed.
Leichenko, R., and K. O'Brien. 2008. *Double Exposure*. New York: Oxford University Press.
McCloskey, D.; Ziliak, S. 1996. "The Standard Error of Regressions." *J. of Economic Literature*, 34(March): 97-114.
Moran, D. 2011. "Introduction: Climate Science and Climate Politics." In *Climate Change and National Security: a country-level analysis*, edited by D. Moran. Washington, DC: Georgetown University Press.
Nordhaus, W. 2008. *A Question of Balance: Weighing the Options on Global Warming Policies*. New Haven: Yale University Press.
O'Brien, K., A. L. St. Clair, B. Kristoffersen (eds.). 2010. *Climate Change, Ethics and Human Security*, Cambridge: Cambridge University Press.
Penz, P. 2010. "International ethical responsibilities to 'climate change refugees'." In *Climate change and displacement - multidisciplinary perspectives*, edited by J. McAdam, 151-174. Oxford: Hart Publishing.
Picciotto, R.; F. Olonisakin; M. Clarke. 2007. *Global Development and Human Security*, Transaction Publishers / Springer.
Rodrik, D. 2011. *The Globalization Paradox: Why global markets, states and democracy can't coexist.* New York: WW Norton.
Segal, J. 1998. "Consumer Expenditures and the Growth of Need-Required Income." In *The Ethics of Consumption*, edited by D. Crocker and T. Linden, 176-197. Lanham, MD: Rowman and Littlefield.
Schneider, S. 2009. Dinner speech at conference on Global Environmental Change and Human Security, Oslo, 22-24 June..
Schuhmann, R. 2010. Presentation at conference on Climate Change Ethics and Development Ethics. Pennsylvania State University, 10-12 April.
Shue, H. 1996 (2nd edn.). *Basic Rights: Subsistence, Affluence and U.S. Foreign Policy*. Princeton, NJ: Princeton University Press.
Stern, N. 2007. *The Economics of Climate Change – The Stern Review.* Cambridge: Cambridge University Press.
Stern, N. 2010. *A Blueprint For A Safer Planet - How We Can Save the World and Create Prosperity*, London: Vintage Books.
World Bank. 2009. *World Development Report 2010: Development and Climate Change*. Washington DC: World Bank.
UNDP. 2007. *2007/2008 Human Development Report: Fighting climate change.* New York: United Nations Development Program.
UNESCO. 2008. *Human Security – Approaches And Challenges*. Paris: UNESCO.
Van Renswoude, J.; vd Maesen, L.; Herrmann, P. 2012. *Development toward Sustainability*. The Hague: European Foundation for Social Quality.