

Reaching the Limits?

Talk at the Bath Royal Literary and Scientific Institution

Jane Heal
2nd May 2017

1 Introduction

Our topic today is: Why are we human beings are having such difficulty in dealing with climate change?

Most reflective and informed people think our response is not adequate to the situation we find ourselves in. And among those who worry about the issue there is much concern and talk about why we are not acting more effectively. It is tempting to moralise the issue and blame wicked people or institutions. But I propose to explore another answer, namely that we have trouble dealing with the issue because, in trying to grapple with it, we are pushing at our limits, intellectually and emotionally. It's not that we wholly lack ways of trying to handle things. But the shape of the challenge is unfamiliar. The emotional and conceptual tools we have for dealing with it are fragile and, as of now, not sufficient. Some of us find it difficult to think about the issue at all. And among those who do think about it there is much stress, confusion and difference of views, And why is all that so? That is what we need to explore.

Who am I and how do I come to be thinking about these issues. I am a philosopher, professionally interested in central questions about the human mind, human nature and intellectual history. Also, as a citizen, I have been concerned about climate change for twenty years. During that time have acquired a fair amount of general knowledge of the science of climate change and also the politics and psychology of it. And I have picked the brains of my colleagues, on these matters. This talk tries to put some elements from all these sources together, to get an overview of our situation.

2 Priorities

One central thing we differ about (from which much else follows) is the priority we give to climate change (as individuals, institutions, governments . . .). By giving something priority I mean devoting resources to it, of time, energy, intellectual power, wealth, emotional strength, personal influence.

An example:

Suppose a person to have received the unpleasant news that a loved one probably has some progressive and nasty illness. So there is a very high likelihood that there is, in train in the loved one, a process which will lead to bad things unless steps are taken to arrest it. When that news is received it is likely that the person will make the loved ones's illness a priority. And now, depending on exact circumstances, this comes out in various ways. One way is putting in resources to getting appropriate treatment, if the treatment known. But another way of giving the matter priority, if the disease, or perhaps its exact form, is not wholly certain, is investigating further the exact situation with respect to the disease. Or one might combine these if the treatment is known and it is known that the earlier it is applied the better. Then one might embark

on the treatment while still investigating whether the disease was present, or what version of it was present. And yet another way of giving the matter priority would be investigating what a good treatment might be, in the case where no good treatment is currently known. But in all these cases the likely existence of the process culminating in the nasty thing is a galvanising spur. It makes the person deploy resources on the matter with urgency, so as to avert the nastiness.

With climate change we have the probability (indeed, as to the general trend the certainty, although many details are still unknown) that there is in train in the Earth - its atmosphere, oceans, biosphere - a process, driven by human activity which if not arrested will result in rise in average global temperatures within our lifetime (if we are young) or for our children and grandchildren (if we are older), of 4 or 5 degrees Centigrade or more. The consequences for other elements of the climate and biosphere include: driving of the hydrological cycle more energetically; rising frequency of droughts and floods; loss of biodiversity in life in seas and forests and savannahs; flooding of cities and fertile coastal land through sea level rise; pressures on food availability and increase in famine; increase in refugee flows; increase in disease; rise in political instability and discontent; increased support for extremist movements; greater prevalence of war both international and civil; appearance of more failed states; pressures on civil order, good governance, rule of law, education, health care etc. - and these things even in states which have not yet failed. Will we be immune here in the British Isles? It does not seem likely.

One small possible example of such processes already in train. The political agitations of the so-called Arab spring rose and fell in line with food prices. The unrest in Syria was preceded by an extended period of drought, leading many impoverished farmers to move with their families from the countryside to the towns. The aid response of the Assad regime favoured non-Sunni sectors of the population. That in turn led to dissatisfaction, protest and its suppression, more unrest and finally civil war. Syria used to be a middle income country with some decent universities. It is now, in part, a failed state in which education and health care have crashed for much of the population. And large numbers of Syrians are refugees have moved to states to neighbouring states, leading to unrest, unhappiness, political stress there. Whether or not those who see climate change as a significant factor in the Syrian troubles are correct about this particular case, they are certainly right in thinking that this kind of cascade of dismal political and economic events is what is to be anticipated from climate change.

And for some people dealing with all this is a priority. They spend their resources on it in the ways enumerated, trying to persuade individuals, businesses and governments to act. Others give it priority in the radically opposite sense, by trying to deny that these kinds of things are under way and trying to prevent action to mitigate and forestall them. And very interestingly there is a third group who do not give it high priority in either of those ways, for whom it does not much affect what they think or do. And it is the existence of the second and third groups which present the difficulty for the world in getting to grips with the issue. Why are there these differences in response? Plainly it is something to do with how we think and feel, with how our minds work. So how do our minds work, so as to result in our giving, or not giving, priority to one or another issue? Why do we channel our energies as we do?

3 The back story

Let's remind ourselves of the broad outlines of evolutionary and cultural history, in a lightning sketch, to provide the setting for some thoughts about this question.

We have evolved over 3.5 bn years or so, from unicellular organisms. Those organisms were (and their current descendants are) capable of very limited registering and responsiveness to what's around them and in immediate contact with them. They can nourish themselves by engulfing nutrients, they can excrete what is not needed, they can withdraw from what is harmful. But they do not register what is at a distance from them in space and time.

But as evolution moved on, some of them gave rise to multicellular organisms, with specialised kinds of cells, assembled into tissues, limbs, sense organs and the like. These organisms were capable of awareness of and action on what is around them at a distance in both space and time. How this works in detail is obscure and fascinating. But in broad terms it seems evident that creatures have evolved so that what goes on at the surface gets processed and transformed, into continuing patterns of activity inside, giving rise to what we call 'perception' of things at a distance. And also, in yet more complex animals, newer of this arriving information interacts in complex ways with patterns of activity already installed, so as to give rise to yet more nuanced responses to the environment, which we call 'learning'. At its most complex, these kinds of processes amount to the animal investigating and representing more and more kinds of thing and stuff in that world, and building up an awareness of the layout of that world in time and space.

A further level of complexity comes from the fact that some of these animals are social. Hence the things to which they can respond include each other, represented not just as potential predator or prey, but rather as rival, partner, offspring and the like.

And about 40,000 years ago creatures very like us begin to be apparent in archaeological record. We find evidence of the existence a kind of primate, a hominid, which is not only social but also naturally cultural. That is to say that it is the nature of the kind of animal to be capable of acquiring skills and building on what has been acquired and passing the improved result on to yet others. So the record shows us increasingly elaborated and elegant hand axes, then cave drawings, early artefacts in bone, woven artefacts, baked clay, metallurgy, settled villages, domestication of animals, planting of crops. And soon (10,000 BCE) we have the emergence of recognisable cultures and states, Ancient China, Babylon, Egypt, Greece. And then we have cities, statues, temples, writing. And soon we are into history, real named individuals, prophets, poets, kings, queens, and datable events, battles, festivals, discoveries and so on and on.

Skipping forward now with extreme rapidity, in the 16th C and 17th C we (or at least some among us) begin to get a sense of the layout of the solar system, its size and structure, and begin also to get a grip on recognisable physics, chemistry and physiology. And by the late 18th C we've got deep space coming into our awareness, with Herschel and the refracting telescope. And in the 18th and 19th C we begin to get some get some grip on deep time, with geology and the theory of evolution. Also

at this point we are also in a position to begin to do serious intellectual history, becoming more aware of how much we have changes. Also disciplines like linguistics, psychology and anthropology come on the scene, adding further to our self-awareness. Mathematics which has been gradually accelerating from the ancient world, now moves on amazingly and results (among other things) in modern logic and the development of computing. From the industrial revolution onwards, technology and manufacturing, in tandem with science, have been moving with increasing speed. And with the 19th and 20th centuries we have the modern state, Weberian bureaucracy, capitalism, Marxism, world wars, the internet, Google, the Arab Spring, ISIS, Brexit, Trump . . . And whoosh - here we are! And still, of course, on it goes, billions of us, each giving priority to some enterprises, each channelling his or her energies in particular ways.

4 Some comments on this

I want to draw your attention now to two facts which stand out when we consider this lightning sketch of how we have come to be where we are - two facts, that is, which are relevant to our question about our ability to deal with climate change.

The first of these is that there has been conceptual change, and related cultural and linguistic change, throughout human development. We can see this in the written records of comparatively recent historical time. But plainly it was going on throughout earlier ages too, at the point when language emerged and then began to become more complex and varied. The shape of our cultural life has always been changing and developing. We discard old concepts as inadequate and new words, new skills, new ways of thinking, new practices, new options for action come on the scene.

Very evidently, we have new science, as we probe out into the natural world. But we also have new religion, technology, law, politics and art. We have new concepts for the new ways of human living which we invent, or which emerge among us. An example of this. Looking back deep into the past we find no cities, but only men and women living in small nomadic hunter-gatherer groups. Fast forward from that a few thousand years and the descendants of the hunter-gathers are living in cities, and have words for 'citizen', 'law court', 'army' and the like, which their ancestors did not have. But the words make sense only because the city dwellers have a set of practices, habits, skills and attitudes which they instil in their young, which together provide the city's inhabitants with understanding of the possible roles within it and skills to carry them out, and feelings about how those can and ought to be discharged. Children in the city are brought up to understand that there are laws, that there is such a things as being a loyal citizen, or a just magistrate, or a courageous general, or far-sighted statesman and that setting out to take up some such role is how one lives one's life. These concepts, and their related practices, build in on what was there before, with the hunter-gatherers, but are not the same.

A good number of the new concepts we have come to use over the millennia have to do with institutions we have developed for making us aware of and care about things (often themselves social creations) which are larger rather than smaller - our city not just our family, the long term stability of social relations rather than short term revenge on one who has wronged us - and so on.

And here now is a second, and rather different kind of thought arising from the lightning sketch.

For some part of this story, the last few tens of thousands of years, there have been creatures who live their lives 'consciously', in one sense of that term. These are creatures who are aware of what is happening to them (that they feel hungry, are being pushed, have fallen into the river . . .) or what they are doing (day dreaming, walking, drinking, quarrelling . . .). So they know and can think about how things are with them (in some respects at least), and they know what they are up to. An important aspect of this 'conscious' mindedness, for us, is memory for facts and for episodes in our lives, which we can string together into a narrative. So creatures with a conscious life (in the sense roughly indicated above) are in a position to reflect on their lives, tell stories about it, make plans and so forth. This 'consciousness' is what becomes possible when the cultural transmission of accumulated skills and language reaches a certain degree of flexibility and sophistication.

When did this 'conscious' living emerge and by what stages? It goes back at least a good few thousands of years. We have the writings, poems, building and the like of people from many thousands of years ago and plainly they are living rich, conscious, human lives. But before that? Very unclear! But we need not bother about that.

The important point for our purposes is that what we think about when we reflect on living our lives, is centrally our conscious lives. It is the goings on there which very much preoccupy us, which are in the foreground of attention, the focus of our interest. And one element of our conscious lives is our sometimes deliberating explicitly, about what is the case, what to do - what to eat for dinner, whether to take the job, whether to insulate the house, how the Brexit negotiations will turn out . . . and so on.

At the start of this talk we asked about our ability to deal with climate change. The situation is that there is a fair amount of conscious thinking going on about climate change. Many individuals, businesses, governments are aware of it and push about plenty of words about it. But the priority given to it in this does not give rise to effective action. The energies and resources of individuals, businesses and governments are, as things actually work out, channelled elsewhere. Why is this so?

And we see now that we cannot answer the question without thinking about the more general issues of the power of conscious, deliberated thinking. It is such conscious thinking which is going to lead to action on climate change. Reflexes and instincts will not do. We need technology, treaties, regulations, etc etc - kinds of things which can only come about as the result of conscious thinking. So what role does such thinking have in our lives? How much power does it have? Within what setting does it operate?

5 The overall structure of the mind

To answer this question we need to think about the structure and capacities of a person as whole, as suggested by the survey of evolution and history we've whizzed through. The general picture offered is that we are matter organised more and more intricately, so as to be able to exhibit increasingly elegant and interesting capacities, each capacity building on, incorporating, what goes before, but opening up new

possibilities. (Nothing reductive or determinist is intended by these remarks. To go off into that is to get sidetracked from the issues we need to stick with now.)

For our purposes we can, in a very rough and ready way, characterise the kinds of capacity and activity which occur, in three different styles.

To start with there is the ongoing flow of organic life in the cells of the body, each nourishing itself, producing energy, replicating itself, sticking together with other cells etc etc, - according to its own internal dynamic - as did its unicellular forebears. Secondly, and looking slightly wider, there is what is going on in us, leaving out descriptions calling on complex cultural matters and focusing on what we do in common with other mammals. For example there is: exhibiting reflexes; feeling hunger, thirst, heat and cold; being subject to a diurnal rhythm of sleeping and waking; seeing, walking, grasping, moving, eating etc. And thirdly there is what we do, described in culturally rich terms. And characteristically much of what we find when using this third kind of description is a culturally elaborated form of activity which can also be characterised at the second level. So we go to sleep and emerge from sleep in distinctive culturally shaped ways (beds, bedding, bathrooms . . .), which have distinctive meaning and richness for us. Similarly we eat and drink in culturally shaped ways (breakfast cereals, tables, bowls, spoons, feasts, parties . . .). Also we keep warm by dressing in culturally shaped ways (putting on jackets, doing up buttons, . . .). And again these things (meals clothes), have meaning for us and carry messages, consciously and less consciously about who we are, whether we are succeeding in our lives or not and so forth.

What I want to stress to you is that in our living our lives, as we ourselves are aware of them at the conscious level, the major determinants of what goes on are habit and skill, both of which we have been trained into, as we grew up in our particular culturally elaborated version of the basic biological activities of eating, sleeping and so on. It is habit which largely dictates the broad shape of our days and the activities, and habits and skills they call on, which fill in the details. We get up, take off our pyjamas, put on our clothes, eat breakfast, set off for work, eat our lunch, go home, make dinner . . . We take holidays at such and such a time of year, we acquire our food by shopping, at this time of the week. And in carrying out this flow of activities which habit lays down, we exercise our skills (clean teeth, do up buttons, make toast) at relevant points, which themselves are made salient to us by the habits of noticing which we have been trained into.

A considerable amount of what we do is interacting with each other, in the home, when shopping, at our jobs, etc. And here again we find the biological relations of our social primate nature (mate, offspring, dominant male, senior nurturing female etc.), but as shaped and enriched and transformed by culture. And similarly we find there proliferating and habitual patterns of interaction. For example, we have been trained to be aware that one can talk about this kind of thing to this person, but it won't do to raise it with this other person. Our dealings with others are shaped by the relations of social role, power, intimacy, respect and the like in which we stand to others, together with the various habits and skills which have been drilled into us about how those relations and interactions are to be negotiated.

6 The powers of the conscious mind

So now, let's put the question brutally, what role is there for the deliberations of the conscious mind in determining what a person does?

The answer implicit in the above account of human evolution and human nature is: not as much as some pictures suggest!

On the picture I have sketched, the power of the conscious mind is quite severely circumscribed. The thoughts entertained there will lead to action, only given an appropriate setting, given a substructure of further thoughts, habits, feelings and the like, and also only if it meets with appropriate thoughts, habits and feelings in others.

Let me elaborate on this. Explicit deliberation is one of our acquired skills. We exercise it, in conjunction with other skills, when prompted to by appropriate contexts. When I get up in the morning, at some point in the procedure, I may deliberate about what to wear. But the ideas which strike me, which options I take to be open to me, are served up to me at that point, from a repertoire which I have been acculturated to call up at that point. The same is true of all thinking. The ideas which strike us, the ideas which are to hand when we start thinking about a topic, and the skills we have for using those ideas, are all themselves matters of habits and skills which have been installed in us.

The conscious mind – including deliberated thinking – does not control the doings of what would otherwise be a wholly inert, lumpish, merely physical thing. Rather it tweaks, directs various processes which are ongoing and automatic or habitual, processes which are already proceeding under their own impetus. These are, at one level, the metabolism in the cells which shapes such things as how much energy we have, whether we are alert or sleepy. And at another level we have the habits and skills of ordering our days, shaping our lives, including pushing round words and ideas, which we have been trained in. And the conscious mind is not wholly 'rational' (whatever that means) or transparent to itself. Rather its capacities depend on what concepts, habits and the like have been installed in the person.

Don't get me wrong. Deliberated thought is capable of getting great things done - in the right circumstances. We are capable of caring about more than the short term. Indeed we want meanings, and big and generous causes with which we can identify, in our lives. But grip on such meanings and causes - and the habits and feelings and concepts which go with caring about them - need installation in us by education, ritual, practice, by immersion in a way of living where caring about them is already going on - and where there are recognised patterns of expressing that care, where people are being honoured for roles in promoting those meanings and causes. Let us go back to the example of the concept of my city, and all that goes with it. If my city is under threat from drought, I with others may put in much labour building an aqueduct. I, along with my fellow citizens, may disrupt my comfortable life to labour with a spade, to shape rock, to fetch clay - and feel good about doing so. But if the need for the aqueduct vision and the plan for it, i.e. the conscious thought of some deliberators, communicated to me and others, to turn into a real aqueduct there needs to be a setting where 'doing good things for my city' is a recognised and familiar and respected kind of prioritising of effort. 'Our city is in danger - we must all rally.'

One interesting corollary of this overall picture of human beings is the following. What we focus on consciously and find ourselves pursuing is not guaranteed to include everything we need for a rich and satisfactory life. It may leave much out.

This is because a great deal of what we need for a rich and satisfactory life, is just supplied to us. This includes bodies with digestions, limbs and the like. More broadly it includes gravity to hold us on the surface of the earth, sun, rain, plants, oceans, currents, clouds, other people, our culture, etc etc. And by and large, in our deliberative lives we take most of this, and its continuance, for granted.

I'm not saying human beings are not aware of this given environment and its importance for us. Wonder at it and its complexity, and gratitude for it, have been part of cultural traditions for a long time. But taking responsibility for it for large scale features of it - that's a very new idea for us.

And, finally to reach the title of this talk, that is where we are at our limits, in grasping what is going on with climate change, and in finding ways to envisage it, to feel about it and so to act on it.

Let me expand on this. Understanding the earth as a whole in any detail is an achievement of the last three to four centuries, via the explicit, complex, intellectual constructs of the sciences such as physics, astronomy, chemistry, biology, together with their historical dimensions such as cosmology and evolutionary theory, archaeology and so on. In these last four centuries the cultural tools and constructs of natural and social science have both become amazingly more elaborate. But our grip on them is tenuous, partial, distributed among many people. In grasping climate change there are many interdependent things to think about – oceans (currents, sea level, temperature, dissolved CO₂ etc), skies (clouds, wind, rain, particulates etc.), land surface (forests, deserts, savannahs, rivers, glaciers, etc.), and the behaviour of the life forms, including ourselves, which inhabit the land. We need to envisage not only these many strands but also how they may develop across time at varying scales, of decades and centuries. And we have to deal with probabilities (which in any case we find difficult) at many points in building up the overall picture. Getting even the outlines of the whole things in one's head is difficult - let alone understanding all of the science in detail.

Furthermore, getting any clear conception of what we can do practically is also difficult, because it too is complicated. There are many options for action, many agents, many timescales. Should we be thinking top down or bottom up? Should we be thinking about and putting our energies behind world wide treaties? carbon trading? new technology? . . . And the longer timescale is an unfamiliar one for which we do not have many precedents in our familiar examples of social, political or economic action. Ten years or so is long time horizon for a government or business decision. Many potentially powerful players are habituated to something even shorter.

We might be able to overcome the obstacles of complexity in understanding the processes and the options, IF the issue were given priority. If pretty well all relevant agents - individuals, governments, firms and so on - were agreed - 'something's got to be done!' then we could get stuck into trying to agree something. But, back to where we started, it does not get priority.

And this circles back to the difficulties we noted. It is difficult to grasp what we are doing, difficult to find a way of characterising and feeling about it, which can then express itself in appropriate institutions, agreements, actions.
'My city, my country - these are in danger - I need to act.' These things make sense to us.

But 'My biosphere is in danger' . What's that?
And what are the feelings one should feel about one's biosphere? And how do we locate those feelings vis a vis commitments to the more familiar larger cause which give meanings to our lives., our family, city, country, or political cause - the other things we've been educated to care about?

In short: here's the picture:
There is a whole vast set of concerns, habits, efforts which is rolling on. Individuals, businesses, governments are, in interlocking and mutually supportive ways, going about doing what they have been acculturated to do. They are pressing on with habits of thought and feeling and action which are familiar and comfortable to them, which supply meaning to their lives, by which they measure their success, their love for their families, their achievements and so on. That's 'business as usual' driving on.

And now here comes some knowledge of climate change, some awareness of what 'business as usual' may lead to. This knowledge takes the form of complex, difficult to grasp and scientifically discovered, facts about CO2 and warming and oceans and harvests and so on, the going on of processes which undermine things we have taken for granted.

And the challenge is to get those conscious thoughts to affect the operation of the 'business as usual' social and psychological world - with all its habits, energies, ambitions, knitted together and driving on.

And it seems sometimes that it is like trying to control a great machine, full of motors and cogs wheels and drive belts, with some construct made of a drinking straw and a bent paper clip.

Where do you insert these thoughts? Who needs to have this information? What are they to feel about it? What are the levers of action, habits of attention etc. they can now call on? The answers to these questions are obscure.

There is because there aren't the shared action-guiding visions - 'protecting our biosphere' - or familiar and honoured ways of going about doing that. The concepts, feeling, habits, institutions, possible actions etc which are needed are not robust, routine, acknowledged parts of our cultural, psychological set up.

We're trying to build them. But doing this requires diverting resources from where they are going now in the 'business as usual' scenario. So building them is in competition with other interests - commercial interests, also our own comfort, sense of status and so forth. And the materials we have to hand, although they supply useful elements, may also distort things. For example, the 'deep green' way of thinking, draws on religious feelings and concepts present the biosphere and our dependence on it as something calling forth a particular kind of commitment. But this may also provoke a backlash among many who are, rightly, aware of the damage

which (some) religious forms of thinking have done. A left-wing way of thinking also appeals. Wicked capitalists and globalised businesses are the cause of it all. There are insights here. But sole stress on this both provokes right-wing opposition and overlooks how complicit we (consumers in the west) are in the 'business as usual' model, by which we are provided with the clothes, smart phones, flights, cars etc. which we have are unwilling to rethink. And the contrast of 'self-interest' and 'altruism' which structures much ethical and political debate is not (in my view) really adequate to the issue.

So, in summery, just reiterating the facts of what may happen on 'business as usual', does not move us. That is just waving the straw and the paperclip again. And certain other models, religious, left-wing and the like, do not quite serve our turn when we try to make the straw and paperclip mesh with existing patterns of motivation. We need something new. Anyone who grasps this situation should get involved and put his or her energies to the challenge - sign up to campaigning group, write a song, talk to other concerned people, read some of the good books examining these things Sitting on one's hands and saying that 'they' ought to do something about it is not a good option.