Loss and Damage: Conceptual and Methodological Challenges

Panel contribution to the Population-Environment Research Network Cyberseminar,
"UNFCCC's New Work Program: Loss & Damage from Climate Change" (October 2013),
http://www.populationenvironmentresearch.org/seminars.jsp

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This paper draws heavily on conceptual work undertaken in a similar piece, on non-economic loss and damage, by Myself and Anthony Oliver-Smith (2013). Credit for many of the ideas described here should therefore similarly go to Tony.

Loss and damage is an important conceptual policy innovation in climate change discussions and considerations. It is crucial for ensuring social justice in a context of differentiated responsibility for GHG emissions and will also play a central role in effective decision-making about GHG concentrations. Notwithstanding such potentially positive contributions however, realising this potential is not without its challenges. The two most prominent of these pertain to the **measurement** and **valuation** of that which is lost or damaged.

Before discussing these, it should be pointed out that, as with all work on the social implications of climate change, a central conceptual and methodological challenge is the issue of *attribution*. As discussions of attribution are elaborated elsewhere, and the challenges it poses in the case of loss and damage do not appear particular, I will leave it alone for now, simply noting that such issues remain pertinent and that they are not easily resolved.

Returning to the discussion of loss and damage and the issue of *measurement;* the problem is simple: If we do not know how much of something there is, then we
cannot measure how much of it will be, or has been, lost or damaged. For example it is impossible to know the loss in biodiversity caused by changing climatic thresholds, without knowing the levels of species diversity before and after climate shifts took place. Similarly it is impossible to know how much damage is done to housing infrastructure as a result of increasingly frequent flooding, without knowing the amount of housing infrastructure in an area, as well as its rate of growth, both before and after flood-return-periods changed.

As such one major challenge to realising loss and damage as a tool for affecting social justice and informing decisions on GHG concentrations is the issue of record keeping. Notably climate change impacts threaten a number of sectors for which poor record keeping exists. These include a host of social dynamics, including: customary land rights, informal labour relations and economic transactions; as well as a multitude of biophysical concerns, most notably the constituents that make our ecosystems function and our world habitable.

The second challenge to effectively invoking loss and damage in climate change policy pertains to how we determine the *value* of those things that have been lost and/or damaged. The centrality of this issue cannot be overstated. How we understand loss and damage, as well as how we measure it, depends on how we value those things that will be, or have been, lost or damaged. Loss and damage is therefore fundamentally about value.

The centrality of value to discussions on loss and damage presents a number of problems. These all stem from the fact that *value is socially constructed*. That is to say: value is not inherent in things. It only exists insomuch as humans invoke things with value as a result of their various attachments to them. This assertion, that value is socially constructed, should not in any way be taken to suggest that value is not real or that it is unimportant. Humans have very good reasons to value a multitude of things, and the emotional experiences that manifest as value are entirely real and absolutely meaningful.

That value is socially constructed, however, raises a number of issues. First and foremost is that value is subjective, and therefore can be highly idiosyncratic. As a result the same object can be incredibly valuable to one person, while to another, it might be entirely unimportant. This presents a significant challenge when trying to determine loss and damage, as it highlights the impossibility of pinning a single figure on the loss and damage that will be generated by GHG emissions.

The issue of idiosyncratic value is pronounced in the case of climate change where the very notion of loss and damage relies on assumptions about how the environment should look. As critical environmental studies have made clear, the environment is experienced differently by different persons (Robbins 2012). Therefore changes to the environment, wrought by climate change, may result in conditions that one person considers a loss or damage, while another could consider them improvements. Illustrative in this case, is a hypothetical scenario wherein climate change causes a shift in vegetation from a high biodiversity biome to one which is amenable to clearance and suitable for monocropping species with a high market price. As a conservationist, such a change would constitute loss or damage, however for a bureaucrat on an agricultural board, such a change would be considered a beneficial improvement. An outcome of this reality is that assessments of loss and damage need to be explicit about what is being lost and/or damaged (biodiversity, housing, arable land, labour hours), and for whom such loss and/or damage is being constituted.

A second implication of value's 'social nature' is that it cannot be observed directly. Instead it has to be revealed through some expression of a person's emotional experience. An effective way to address this problem is to express value relatively, by representing it in terms of other things. The relative expression of value is the concept underlying the use of the market for assigning value. Where money serves as the means by which all things can be traded, money values are an effective means for expressing value, and thus for realising the effectiveness of loss and damage in policy negotiations and decision-making.

Notably however, despite the usefulness of the market as a means for assigning value, the use of 'market value' still presents issues when trying to assess loss and damage. These are principally the result of the difference between 'price' and 'value', and due to the fact that many of the things that are threatened by climate change are not regularly traded on the market. Both of these issues are compounded in cases where the value of an object is inalienable from the object itself.

The distinction between price and value is a central problem when using the market to determine value. Market valuations provide information on the price of something. In perfectly functioning markets price is an excellent measure of value, however markets never function under theoretically perfect conditions (Snyder, Williams, and Peterson 2003). Price is therefore not determined by value. Instead it is determined by the intersection of supply and demand. The extent to which we value something has an impact on price through its impact on demand, however the dynamics of supply mean that the price of something can end up being much lower than its value. The implications of this distinction for loss and damage are that market prices may well undervalue things which are lost or damaged by climate change.

Distinctions between price and value are significantly less important in cases where the value of something is separable from the thing itself (e.g. a set of common farming tools). In such a case it does not matter what the cost of the thing is on the market, nor whether the market-price is below its value. What matters is that the thing can be replaced and therefore its value can be realised. However, should it be the case that the thing which is lost or damaged was imbued with significant symbolic meaning, so that its value cannot be separated from it (e.g. a piece of original artwork), the use of price to determine value can be deeply problematic. This is because the price of something on the market, or the price of the materials needed to create it, might be quite low – as a result of supply being abundant. In such instances the low price does not adequately represent value, which could be much greater as a result of the symbolic meaning which is attached to an object, and which is inalienable from it.

Issues of symbolic meaning might seem unimportant in the context of climate change, which threatens much more immediate and concrete things, such as the source of people's livelihoods or even their personal, physical integrity. However shared symbolic meaning is the foundation of culture, which in turn constitutes the basis of morality, coordination and social reproduction. As such the systematic loss of the sources of shared meaning can result in cultural disintegration and, as a result, the loss of community cohesion. Such dynamics are certainly pertinent to climate change (most clearly in the case of forced displacement), which threatens a multitude of the cultural elements that sustain communities through expressive links to natural features (Renaud et al. 2007). Such objects include places with significant spiritual importance, such as burial grounds, rivers, mountains; and objects with important communal meaning, such as village squares, homes and market places.

While on the issue of 'loss' and 'culture', it should be noted that the issue of 'culture loss' raises an

important conceptual challenge to how we conceive of 'culture' and its loss. Anti-essentialist positions on culture pose a challenge to the idea of culture loss. For if culture is dynamic, and therefore always changing, how can it ever be lost? To resolve this problem anthropologists have pointed out that while culture is fundamentally dynamic, the wholesale loss of material objects around which cultural practices are manifest can result in a distinct break in the continuity of cultural practice. Such a loss of practice results in a loss of both the social relations and knowledges that stem from them. When referring to 'culture loss' it is the loss of this cultural property, and the knowledge it produces, which is being referenced (Kirsch 2001).

This reflection on the dynamism of culture also contains a warning against romantic conceptions of 'traditional society'. For, when contemplating culture loss, one has to consider its concomitantly productive possibilities: the loss of certain relations, allows for the generation of new ones (Kirsch 2001). In this regard it needs to be appreciated that such new relations might be considered more or less desirable than the ones they replaced. Keeping in mind the conceptualisation of 'culture loss', just described, the loss of shared symbolic meaning thus presents a major challenge to effectively implementing loss and damage as a policy tool. This is because accounting for loss and damage will require weighing the relevance of '(un)desirable' cultural practices against the importance of cultural autonomy, which is manifest through the existence of an uninterrupted continuity of cultural practice.

Returning to problems of valuation: while contemplating the loss of things for which our emotional experience of their value is inalienable from the thing itself, it should be pointed out that it is possible to represent the value of one-of-a-kind objects (or things whose value is inalienable from their physical form) in terms of other things. This is clearly evidenced by the way in which people regularly buy and sell original artwork, despite such works being irreplaceable as a result of their inalienable symbolism. More than this, such art is often effectively valued, in market terms without actually going on sale. The means for doing this however rely on analysing the sale of analogous pieces of art. Such valuation therefore relies on the thing that is being valued, being traded regularly on the market.

Notably however, in addition to threatening objects for which their value is inalienable from their physical form (and which therefore are irreplaceable), climate change also threatens a host things which are not regularly traded on the market. Such things include the sorts of culturally meaningful objects already described, but also extend to a host of ecosystem services and psychological states. How, for example, do we value: fresh water, the loss of spiritually significant places, or the experience of being physically and emotionally healthy? Given that climate change threatens all these things (among many others), how do we calculate the loss and damage that might manifest as a result?

Numerous means exist for addressing the challenges to loss and damage calculations highlighted here (e.g. contingent valuation, compensation, satisfaction and restitution). Notably however, under different circumstances, different solutions have quite different merits. It is beyond the scope of this note to undertake a discussion of such issues (for a more detailed account see Morrissey and Oliver-Smith (2013)), however it should be pointed out that in certain instances the notion of loss and damage seems insufficient as a means for addressing the injustices associated with climate change. This is principally because, in certain instances, it will be impossible to replace, or compensate, people for the things that have been lost or damaged. In such instances what is required is the constitution of new values and systems of meaning, a task which is incredibly challenging.

Extending these thoughts; given the extent to which vulnerability is socially constructed, an account of loss and damage which is focussed on compensation and restoration could prove limiting. In a context where those groups least responsible for GHG emissions are experiencing their worst effects, including uncompensatable losses, the focus in the aftermath should go beyond simply restoring those groups to their previous positions of marginality. Addressing loss and damage in a context of climate change should instead be seen as an opportunity for transforming those societies which are most vulnerable and addressing the underlying causes of their vulnerability. That such causes might lie in the terms upon which these societies are currently integrated into (or excluded from) the global system, these cannot constitute justifications for maintaining their marginalised position.

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