Responsibility and Liability for Climate Loss and Damage after Paris

1. Introduction

The Paris COP 21 climate change negotiations, as has been highlighted in this special issue, and in the conference held in Cambridge at the end of January 2016 (see Depledge et al, this issue), marked a significant change in the overall international approach to tackling climate change. The optimism which Paris engendered has led many to welcome its provisions, and the compromises, cooperation and mutual support that these represent (eg see Kinley, this issue). However, there are some elements of the Paris Agreement which have been met with a greater degree of scepticism, and perhaps with some justification (eg see Sharma, this issue). Not least amongst these are the provisions within the Agreement, and its accompanying text, which relate to the allocation of responsibility for loss and damage arising from climate change. Legal responsibility and liability for such damage has represented a stumbling block to agreement in the past. The Paris Agreement's approach to compromising such tensions is however one which represents an unusual legal structure, obscuring both its policy significance, and its legal consequences. Ultimately, it maintains the voluntary, cooperation-focused approach characterised by the Warsaw International Mechanism established at COP 19 in Warsaw in 2013 (WIM, see Decisions 3/CP.18 and 2/CP.19). However, in this compromised structure lies the potential for progress.

The very existence of this structure demonstrates that the overall approach to questions of responsibility for loss and damage has shifted, at least in terms of attitude, and the potential for further steps in the direction of liability for climate change is clear. This article will demonstrate this by, firstly, considering the specific approach of the Paris Agreement to such loss and damage issues. It will then consider, briefly, the history of loss and damage provisions to provide some context to the Paris outcomes. It will then assess two aspects of the policy response required in the face of such unusual legal structures: firstly, it argues that there is a need to develop a response to the legal ambiguity, i.e. the relevance of the distinction between responsibility and liability, to which these provisions give rise. It argues that this response must be clear and workable such that the ambiguity does not represent an excuse for inaction. Secondly, it is argued that awareness of the challenges of

assigning legal responsibility for loss and damage is critical to designing policy which is sensitive both to the outcomes of Paris, and to the difficulties in allocation of 'differentiated responsibility'.

In short, if we recognise that Paris distinguishes between responsibility and liability, we are liberated to consider how responsibility can be allocated without fear of immediate liability. Such a liberation brings with it challenges. It may however be necessary if insurance-based solutions are perceived as inadequate. This can be seen if we consider a potential mechanism for such allocation (causation and fault). Being aware of these challenges will improve our policy responses to Paris.

2. Articles 8 and 51

Before considering these specific points however, it is useful to outline what was decided at Paris in relation to loss and damage.

The most significant provision in relation to loss and damage is Article 8, which forms part of the Agreement itself. It states that:

> 1. Parties recognize the importance of averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events…
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> …
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> 3. Parties should enhance understanding, action and support, including through the Warsaw International Mechanism, as appropriate, on a cooperative and facilitative basis with respect to loss and damage associated with the adverse effects of climate change.
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> 4. Accordingly, areas of cooperation and facilitation to enhance understanding, action and support may include:
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> (a) Early warning systems;
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> (b) Emergency preparedness;
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> (c) Slow onset events;
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> (d) Events that may involve irreversible and permanent loss and damage;
>
> (e) Comprehensive risk assessment and management;
>
> (f) Risk insurance facilities, climate risk pooling and other insurance solutions;

(g) Non-economic losses;

(h) Resilience of communities, livelihoods and ecosystems.

…

It is then confirmed in paragraph 51 of the decision to adopt the Agreement however, that Article 8 does not give rise to liability. Thus, paragraph 51 states that: '… Article 8 of the Agreement does not involve or provide a basis for any liability or compensation'. Nevertheless, in the text of Article 8 are significant indications that the parties to the Agreement at least hope that the voluntary attitude to the WIM will extend further such that 'action and support' are facilitated, albeit it on a 'cooperative' basis.

The interaction between Article 8 and paragraph 51, the precise terminology agreed, and the policy mechanisms which may emerge as a result, will all be critical to the success of the loss and damage approach which the Paris Agreement represents. However, whilst the Paris Agreement is fundamentally premised on the concept of differentiated responsibilities, it does not, in relation to loss and damage, provide for tools for assessing these divergent responsibilities for fear of providing a foundation for liability. Whilst this failure is apparent throughout the Agreement (there is similarly no attempt to allocate responsibility in relation to mitigation and adaptation for example), it is particularly significant in the context of loss and damage.

3. A point about terminology

Before analysing the issues raised by these provisions, it is necessary to explain the terminology being employed here. Firstly, in relation to loss and damage, the definition of such key terms is itself contested (UNFCC Subsidiary Body for Implementation, 2012, p. 4; Burkett, 2014, p. 120; Wallimann-Helmer, 2015, p. 470). As can be seen, the Paris Agreement provides no firm definition of this concept and indeed this ambiguity may itself be a (deliberate) means of limiting the practical effects of Article 8. Rather, the Agreement provides some examples of loss and damage, including 'extreme weather events' and 'slow onset events'. The main definition in the text appears to be, however, that loss and damage are 'associated with the adverse effects of climate change'. This definition is very broad, and does not provide any clear guidance as to what constitutes loss and damage *per se* (as opposed to, for example, costs arising through the adoption of mitigation or adaption

measures, both of which could be labelled as ‘adverse effects’ (Wallimann-Helmer, 2015, p. 471)).

This poses challenges in terms of assessing exactly what the consequences of including an article such as Article 8 will be. However, there has already been extensive consideration within the literature as to precisely how to define such key concepts. The reference in Article 8 to the Warsaw International Mechanism too gives some assistance in defining loss and damage. Primarily, the debate in the literature, and in practice, has centred around the extent to which loss and damage can, and should be, distinguished from adaptation and mitigation approaches (Nishat et al, 2013; Warner and Van Der Geest, 2013; Dow et al, 2013). A consensus has emerged which highlights that however much is achieved through mitigation and adaption, some residual damage will still occur (Wallimann-Helmer, 2015, p. 472; Wrathall et al, 2015, p. 277). It is this which is referred to as loss and damage.

However, it is important to recognise, as Wallimann-Helmer (2015) has done, that since the ‘driver’ for adaptation is avoiding loss and damage, the boundary line between the two is not, and perhaps cannot, be clear. An example of this could be coastal protection measures resulting in the loss of coastal habitats. The measures are taken as a response to climate change, and are therefore rightly considered adaptation, but the loss of the coastal habitat is permanent. This terminological difference is critical however, because any sensible response to questions of loss and damage must be able to distinguish these from adaptation measures. Furthermore, the distinction forms part of the toolbox for assigning responsibility for the various outcomes and challenges posed by climate change, and as such, the definition provided must be resilient in the face of political or evidential difficulties and predictable in its application. Robust definitions of loss and damage are therefore essential to the success of any policy seeking to consider collective responsibility for such outcomes. Such a definition is not present in the text of the Paris Agreement itself and nor will it ever be straightforward to apply. The terminological difficulty in distinguishing between loss and damage and adaptation is itself a stumbling block to progress therefore in this new field of enquiry.

Understanding that the Paris Agreement does not necessarily adopt such a definition however (and as a result, aware that even with a clear definition of responsibility, the potential for obfuscation as to ‘responsibility for what’ remains), but recognising the need to rely on a consistent and predictable definition, this article

follows Burkett in concluding that, ‘loss refers to climate-related impacts for which restoration is not possible’ (Burkett, 2014, p. 120) and that, ‘damage refers to negative impacts for which restoration is possible’ (Burkett, 2014, p. 121). The key to these definitions is that, for both, the negative impacts have in fact taken place, whereas in adaptation situations, costs are incurred in attempting to avoid or divert such negative impacts. Thus, as Walliman-Helmer argues, the distinction between the two is as much a matter of goal (i.e. what is the measure trying to achieve, prevention, restoration, or compensation for loss) as it is of practical effects (2015, p. 473). The line, inevitably, is a fine one, but is essential to the proper operation of any system which attempts to allocate responsibility for loss or damage, or indeed one which simply seeks to encourage a sharing of such responsibility, as the Paris Agreement does.

The second terminological clarification required relates to the meaning of the terms responsibility and liability. Article 8 of the Paris Agreement does not itself mention either responsibility or liability. However, the preamble to the Paris Agreement, unsurprisingly, refers to, ‘the principle of equity and common but differentiated responsibilities and respective capabilities, in the light of different national circumstances’. Decision 3/ CP. 19 which forms the basis of the Warsaw International Mechanism too refers to the need to take account of differentiated responsibility for loss and damage. The differentiated responsibility aspect of global climate change agreements is crucial to considering how a loss and damage approach may work in practice, since, to some extent, it must be considered that responses to loss and damage require recognition of responsibility. How, then, can responsibility be defined?

This, again, is a controversial question. However, it is important to note that there is a distinction to be drawn between responsibility (that is to say, a link between actor and factual outcome, be that a causal or other link as defined by the legal system (Honoré, 2010)) and liability (i.e. the legal consequence or burden which befalls them, (Honoré, 2010; Luizzi, 1983). To put this at its most basic: responsibility is the relevant factual connection between the act and the ‘real world’ outcome, and liability is a legal or other normative consequence of finding that such a connection exists whereby the connection is treated as an *a priori* justification for that consequence. A finding of responsibility is not however necessarily followed by a conclusion that liability is justified. Thus, ‘to establish responsibility it must be shown that the harm

was done… by the agency that the law treats as a *potential* basis for… of liability' (Honoré, 2010)) (emphasis added).

Responsibility for an act is insufficient to give rise to legal consequences although a finding of responsibility is a legal conclusion. Responsibility is, in this sense, a non-normative question. The law must also conclude that such responsibility justifies some consequence in order for liability to arise. The phraseology used in the Paris Agreement itself, deliberately distinguishing between responsibility in the preamble, and liability in the accompanying decision, demonstrates that the parties to the Agreement recognise that a distinction between the two is possible and useful.

In climate change negotiations over the years, both the questions of responsibility and liability have been taboo, as Doelle notes (2014), but they are, as has been shown, separable, and there is no immediate reason why allocation of responsibility for climate change loss and damage (relying, as it would, on scientific evidence demonstrating a causal link between action and outcome- a non-normative assessment, (Fumerton and Kress, 2001, p. 84)) would necessarily produce liability of the type envisaged in paragraph 51, i.e. a direct claim for compensation or other form of liability. It is therefore important to understand the difference between the two, and therefore precisely what paragraph 51 excludes.

Paragraph 51 excludes direct claims for *compensation*, or other kinds of liability, arising from loss or damage *responsibility*. Importantly, other forms of liability in this context could include a requirement to contribute a certain level to a collective pot (rather than a loss-related compensation claim) and as such, the prohibition on liability arising for loss and damage would exclude a responsibility-based mandatory requirement to contribute to an insurance pool (and as such, not all insurance solutions avoid the responsibility allocation question – see below). It is not however a barrier to increased attempts to allocate responsibility for loss and damage *per se*, and indeed, other areas of the text recognise the need to examine the collective balance of such responsibility.

By highlighting the distinction between responsibility and liability, it is possible to develop a nuanced understanding of the Paris Agreement which does not prevent the development of a responsibility allocation mechanism, as long as such a mechanism does not represent a basis for liability. There are many reasons why it is critical to examine questions of responsibility, without the outcome being one simply of liability, not least because it allows for a better understanding of the differentiated

responsibilities to which the text refers, important given Friman and Hjerpe's conclusion, for example, that, 'knowledge is still scare regarding how climate change policy makers understand historical responsibility' (2015, p. 303).

It may be argued that any attempt to assign responsibility inevitably results in some form of liability, but this is simply not the case. Assigning responsibility is useful in both moral and practical terms, but there is no need to assign any form of liability to such a conclusion. Nor is it is correct to argue that differentiating responsibility will inevitably result in the eventual imposition of liability. Liability is a legal consequence of a finding of responsibility. The best way to ensure that liability did not result from such a finding would be to assign a different consequence, e.g. the imposition of a non-enforceable or moral duty to support or provide finance to those affected by loss and damage. The importance of this conclusion is discussed in further detail below.

4. The History of Loss and Damage Responsibility and Liability

Before considering this further however, it is necessary to examine how the Paris Agreement modifies our existing approach to such responsibility allocation. As Friman and Hjerpe (2015) have noted, allocation of responsibility for climate change poses a number of significant problems: interpretative problems (what is loss and damage?); problems of justification for liability and relatedly, the issue of retrospective liability provisions (how can we justify liability even once responsibility is determined?); and finally, problems of causal allocation and proof. These underlying difficulties have meant that agreement relating to loss and damage responsibility and liability has been hard to achieve to date, and explains in part the history of such liability which has been heavily focused on voluntary or symbolic approaches.

In part too this is due to the reluctance of developed nations to accept that they should bear the burden of consequences for historical sources of climate change (Friman and Hjerpe, 2015, p. 314). This reluctance, however, is arguably more of a question of fear of liability than it is an acceptance of some causal responsibility. Nevertheless, the result is that any agreements relating to loss and damage have been very modest in their ambitions. Nowhere is this clearer than in relation to the WIM,

the most significant step in the historical development of global responses to loss and damage prior to the Paris Agreement.

This mechanism, which is to be revisited at COP 22 in 2016 but which is given full support in the Paris Agreement in Article 8, is primarily concerned with building knowledge, ensuring cooperation, and facilitating the sharing of expertise. Thus, the mechanism is designed to facilitate the enacting of decision 3/ CP18 whose preamble states that it is based on, 'the need to strengthen international cooperation and expertise in order to understand and reduce loss and damage associated with the adverse effects of climate change'. Nowhere is there mention of allocating responsibility or liability for such effects. Rather, the response to the effects is, it is hoped, to be shared, not left to the 'victims' of such loss and damage. However, this sharing (through, in part, the concept of differentiated responsibility) is to be carried out on the basis of mutual action and cooperation, not through enforceable liability.

Again, paragraph six of this decision:

> Invites all Parties, taking into account common but differentiated responsibilities and respective capabilities and specific national and regional development priorities, objectives and circumstances, to enhance action on addressing loss and damage associated with the adverse effects of climate change.

It does not itself consider the mechanism by which responsibility is differentiated, nor does it engage with the significant policy challenges of so-doing. Rather, the question of differentiated responsibility is left, as with the definition of loss and damage, to mutually cooperative and vague reliance on concepts such as proportionately. Thus, to date at least, the approach to loss and damage has been very much based upon voluntariness following recognition of the need for mutual support with some moral responsibility derived from proportional contribution to historical emissions. This approach skirts around the need to assign responsibility by attaching no consequences to responsibility. The historical development of loss and damage mechanisms is, therefore, reflected in the Paris text. What the Agreement may provide however, adding to the historical developments, is a further impetus to examine mechanisms for assigning responsibility (even if they do not give rise to liability), and this will assist in the sharing goals of the Warsaw International Mechanism as well.

5. Policy Responses to Legal Ambiguity

Thus, it is clear, that the approaches which currently exist to responsibility and liability for loss and damage arising from climate change, by avoiding the question of responsibility *per se*, cannot get onto the question of liability (i.e. the consequence imposed given the existence of responsibility). Therefore, the paragraph 51 denial of liability and compensation fits entirely with a failure to commit to any one understanding of or approach to assigning responsibility. Similarly, the decision to not provide a clear, predictable definition of loss and damage can also be said to limit the practical consequences of the acceptance of loss and damage responsibility.

Crucially, the consequences of these failures for our future policy approaches to funding and supporting those subject to loss and damage arising through climate change may be significant. The ambiguity may act as an excuse for inaction. It is important therefore to examine some potential responses to the failure to commit to a mechanism for allocation so as to avoid such inaction. This article will consider two potential responses: insurance, and responsibility allocation. It considers allocation of responsibility on the basis of causation and fault (there are, of course, other potential ways to allocate responsibility, not least strict liability such that a causal link alone would give rise to responsibility).

History favours the insurance mechanism. It allows parties and policy-makers to avoid the question of allocation of responsibility all together. As such, it could be labelled a risk transfer system in that it spreads the 'financing' of remediation for loss throughout various parties, rather than confining them to the victim. It is this approach which was discussed at length in earlier COP negotiations, and it is in insurance approaches that many academics see the most potential for sharing of costs of loss and damage (Warner et al, 2012). Insurance mechanisms, from a legal perspective, are useful, in that they allow for the provision of funds without ever needing to specifically assign responsibility for the event which has taken place. For example, States could be required to contribute to an insurance pool on the basis of their GDP or similar, rather than relying on their previous emissions on the basis of historical responsibility, or their on-going emitting activities.

Consider here a car accident. The pedestrian, who has been consuming alcohol and who stumbles into the road and is then hit by the driver exceeding the speed limit. Both are causally for the accident. How do we decide, in such a scenario, who should face the cost of the pedestrian's medical care? Let us say that the pedestrian did not

know that he or she was consuming alcohol, and the driver, whose speedometer was faulty, did not know that he or she was speeding. At this point, who should cover the costs? Alternatively, let us imagine that it is the pedestrian is aware that he or she has consumed excessive alcohol, but the driver is unaware of the speed. In such a case, how might we allocate costs liability then? The parallels to climate change are obvious (for discussion of the difficulties in reliably attributing factual cause in relation to climate change, see Huggel at el, 2013 and Wrathall et al, 2015). In particular, the developed countries, up until a certain point in the relatively recent past, were unaware that their consumption was producing climate change effects (Wrathall et al, 2015, p. 279), whereas those countries which are developing now are so aware. Any attempt to allocate responsibility runs into these issues, and so any approach which requires some sense of causation and fault, is difficult to develop (some indications as to how such might be achieved are discussed below).

It is precisely because of these difficulties that insurance approaches have become popular within the literature. They do not depend upon causation and fault, since insurance requires collective pooling of resources, and the allocation of funds depends upon the need of the 'victim'. It is for this reason—its ability to by-pas the question of responsibility—that insurance mechanisms have been the norm in relation to climate change negotiations for loss and damage. However, the Paris Agreement itself, and its decision text in paragraph 48, envisage insurance and risk transfer mechanisms as being only one of a series of possible responses to the loss and damage question. This signals a shift away from an approach where the loss and damage is seen as a collective problem, solved through solely collective solutions, to one where the question of responsibility raises its head. The Paris Agreement may not go so far as to specify how responsibility is assigned, but it does highlight that insurance-type responses may be inadequate, on their own, in solving such problems. It therefore suggests that we move beyond insurance or at least explore alternative options.

Thus, although no definition of loss or damage is given in the Agreement, and no mechanism is cited for allocation of the 'differentiated responsibility' for climate change (and, explicitly, no liability is to be associated with the loss and damage provisions), the Paris Agreement implicitly challenges us to consider mechanisms beyond insurance which would involve allocating responsibility for loss and damage (through causal mechanisms). The ambiguities in the Paris Agreement can, in short,

be seen as deliberate obfuscation designed to prevent further debate as to responsibility allocation mechanisms, or they can be seen as the start of a genuine debate in relation to such mechanisms. The only consequence which is off the table, is liability, and liability, although critical to loss and damage questions, is a possible result, but not an inevitable result, of beginning to think about responsibility. This article suggests that the most appropriate response to this ambiguity is not to use it as a reason to sit idle, but rather indeed as a prompt to begin to consider responsibility more openly than has been the case to date in relation specifically to loss and damage.

6. Policy Challenges of Assigning Legal Responsibility for Loss and Damage

Thus, on the basis of the Paris Agreement text, two issues emerge. Firstly, the mechanism by which responsibility is allocated or 'differentiated', and in particular, the legal elements which would need to form a part of that allocation if it is to be successful, must be examined. The second issue is a forward-thinking one: assuming that such a nuanced and appropriate responsibility allocation mechanism can indeed be developed, how would this relate to liability and compensation if we so desired? These two issues will be addressed in turn.

First, it is useful to consider responsibility allocation mechanisms, so that we are better equipped to understand the concept of differentiated responsibility, and how this relates to loss and damage. There are many different potential mechanisms for so-doing. They could involve consideration of cause; of fault (in the sense of a certain type of knowledge, for example); of total emissions in terms of 'market share'; or of some other fact-based link between emission and emitter. In this article, as highlighted above, the type of responsibility discussed here involves the existence of a causal link, associated with some degree of culpability or fault, for a damaging action between an actor and an action. Two elements must therefore be defined on such a model: the causal link, and the fault requirement. These two elements are elements which are at the core of most legal systems worldwide and as such a causation and fault-based concept of responsibility represents the most 'standard' (although by no means the only) response to questions of allocation hence its consideration here.

Seeing climate change through the lens of loss and damage, highlights the importance of engaging national, as well as international law, in the allocation of responsibility, since it is here that experience in handling such questions lies. Indeed,

Wrathall et al (2015) recognise the immense difficulty that any attempt to regulate climate change responsibility at an international level engenders: 'due to the complex relationship between industrialisation, the production of GHGs and climate impacts, the establishment of a judicial body on climate change is neither practical, nor is this model politically feasible in UNFCCC or international decision-making bodies in general' (p. 286). Harnessing the power of national legal systems or concepts developed at such a level may therefore be useful.

However, this perspective on the question of loss and damage also highlights the dangers of engaging such national legal systems. Although they are able to compensate for the enforcement gap from which international law famously suffers, and can overcome some of the political difficulties outlined above, they will each be idiosyncratic in their approach to definitions of cause and fault, and any attempt to harmonise these approaches will be doomed to fail unless there is an overarching adjudication system. The first lesson to take from any attempt to frame responsibility for loss and damage arising from climate change through the lenses of causation and fault, therefore, is that there is a need to establish not only what decision needs to be made in terms of proving cause and fault, but also to consider who ought to make that decision.

This is not the only difficulty in relying on causation and fault however as a responsibility allocation mechanism. These terms, in themselves, are very difficult to define. This can be seen by focusing on the causal link between an action and an outcome. Similar issues arise in relation to fault. It is useful here to give the example of causation. The analysis here simply highlights the difficulties which emerge when this approach is taken to climate change. It does not suggest that these are the only ways to conceive of causation.

For most situations which a legal system is required to address a 'but for' causal test will suffice: 'but for' the actions of person A, the event would not have taken place (Hart and Honoré, 1985). Thus, but for the speeding car above, the car accident would not have taken place. On this model, the car driver is causally responsible for the accident. So too, incidentally, is the drunken pedestrian. But in many cases involving climate change, the 'but for' test will be unhelpful. This would be the case for example, if we consider CO2 emissions. 'But for' the emissions of the UK, or Shell, or Mrs Smith's car, would this particular severe weather event have taken place? The answer is probably yes it would, but it would not have taken place

were it not for the collective emission. The 'but for' test is therefore generally unhelpful in cases of cumulative damage.

If we do wish to consider causation as relevant to the approach to differentiating and allocating responsibility therefore, it is necessary to go beyond the 'but for' approach. What other approaches are there? Another way of thinking about cause is to look for sufficient elements within a necessary subset. Thus, assuming the UK emitted *x* tonnes of CO2, and it is established through scientific inquiry that *x* tonnes of CO2 *alone* would be sufficient to have caused a particular extreme weather event, whilst we cannot be sure that it was in fact the 'UK's tonnes' that caused the event, we can be sure that their actions were enough to cause the event. The UK's actions would be a sufficient part of a necessary subset, i.e. the subset of CO2 emissions.

A third option is the necessary element of the sufficient subset approach (Wright, 1985; Wright, 2011; Fumerton and Kress, 2001). Thus, it could be said that scientific evidence could not show whether CO2 or methane emissions resulted in a particular event. However, it could be said that *x* tonnes of CO2 *would* be enough to cause the event, whether or not CO2 caused it or methane caused it (or both). Let us say then that in total *x* tonnes of CO2 have been emitted. In such a case, *any* emitter that contributes to the *x* tonnes has contributed a necessary element (some tonnes) to a sufficient subset (the CO2). Similarly, if *y* tonnes of methane would also have been enough on its own, then any emitter that has contributed to the *y* tonnes of methane has also contributed to the necessary subset. The problem with this approach emerges when the total amount of CO2 or methane is $x + y + z$ tonnes. How do we decide whether the emitter's tonnes fell into *x* or *y* (the necessary element) or *z* ('surplus to requirements')? And if this has been decided, what difference does this make? By delving into the detail of causal mechanisms, it is possible to see the challenges posed by attempting to rely on causation as the basis for responsibility (even if no liability thereby emerges).

Thus, '[i]n order to ensure an equitable distribution of efforts, [allocation must be] based on agreed upon principles of equity resulting in an allocation formula', (Doelle, 40), and these principles would have to go beyond causal mechanisms, since focusing on cause alone does not tell us which of the three approaches outlined above—'but for', sufficient element of a necessary subset, or necessary element of a sufficient subset—is the best solution to the allocation problem. As has been noted,

similar problems would arise were we to look to fault, not least because it is difficult to say with certain at what point in our recent history suspicion of climate change transformed into knowledge, such that emitters post this point would be at fault. Furthermore, a fault-based approach, by requiring knowledge, might in fact allocate responsibility more fully onto those countries currently developing, since they are aware of the damage being caused, rather than currently developed countries. This is not an intuitively 'correct' solution to the allocation of liability problem although its precise operation would of course depend upon the date at which we assume that knowledge of climate change became widespread, and current, continuing rates of emission (perhaps on a *per capita* basis).

Assuming, however, that such an approach can be developed, the final issue to consider is the effect this would likely have in terms of compensation and liability. Whilst paragraph 51 explicitly excludes this, it is clear from the rhetoric surrounding the conference, not least from the 'victim' States, that liability, ultimately, may be necessary if sufficient support is to be provided to such states to allow them to adequately handle the loss and damage that they will suffer. Such liability, however, need not be limited to States themselves. Rather, once a responsibility allocation mechanism is developed, the potential for states to utilise this mechanism to transfer their own responsibilities onto private actors is clear. This is an outcome which many would welcome: but it is also one which should only be adopted openly, and with foresight. The danger therefore of developing an allocation mechanism is that it immediately transfers eventual question of liability from States onto private actors, thus allowing States, to an extent, to duck out of their own role in climate change.

7. Conclusions

Despite these risks however, it will still be necessary to begin down the path of the development of an allocation mechanism, most likely on the basis of cause and fault, if progress is to be made beyond the voluntary or insurance-focused approach into a more 'support'-focused approach as advocated to a certain extent by WIM and as 'strengthened' by the Paris Agreement. The refusal to contemplate liability in the text is not a refusal to contemplate responsibility allocation, and indeed, the foundational concept of differentiated responsibility demands that steps be taken to consider this previously 'taboo' subject more openly. Wrathall et al, (2015) issue a challenge:

‘Have we been creative enough in imagining policy alternatives’ (p. 288) to the loss and damage problem?

It can be hoped that the new steps taken in Paris, and the optimism following the Agreement, prompts this open consideration and imagination, rather than allowing a retreat behind ambiguity. If such a consideration does take place however, it will likely become necessary to grapple with questions of causation and fault, and as the discussion here of causation has shown, such issues are far from straightforward. Furthermore, if this path is taken, the implications for private actors becomes clear: once we have an allocation mechanism in place, it may be obvious that the real ‘source’ of the problem is not the State itself. Such an outcome may be far from unwanted, but it must be adopted openly. Thus, the Paris Agreement demands two policy responses: firstly, it advocates further consideration of responsibility allocation and specifically in relation to loss and damage issues; secondly, it demands that we recognise the consequences of such an allocation. This article has suggested some of the difficulties which may arise in so-doing. These difficulties should not however become reasons for inaction: they simply demand that the action which takes place is sensitive and open.

The Paris Agreement implicitly highlights the distinction between liability and responsibility, but it fails both to define loss and damage, and to develop a responsibility allocation mechanism. However, to make progress in this area, we should not be afraid to adopt such a mechanism since liability is not an inevitable consequence of responsibility. Indeed, adopting such a mechanism will be necessary if we are to supplement the current insurance-focused and voluntary approach, which may be needed as the losses from climate change become more serious and apparent. By starting to consider such allocation mechanisms, the usual mechanisms of fault and causation appear ill-equipped to handle this task in relation to climate change. It is important that we are aware of these challenges, and of the need to develop principles of equity which can help determine how we meet these difficulties. Only then can our policy response to the Paris Agreement be resilient in the face of the evidential and political barriers to which climate change gives rise.

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