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Shared Responsibilities in International Law: A Political Economy Analysis

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Shared Responsibilities in International Law: A Political Economy Analysis

Anne van Aaken[*]

1. Introduction

Problems that can only be resolved through international cooperation are increasing. As a consequence, states are cooperating with each other and with international organisations (IOs) more than ever, but often not sufficiently to solve the problems. Consequently, the question arises as to how the problems of public goods (or bads)[1] can be solved cooperatively.[2] Since there is no central world government, the problem faced for all public goods arises: under what circumstances will they be provided? State sovereignty essentially requires us to rely on voluntary provision and contributions. When social scientists analyse the potential for cooperation on global public goods, they focus on the benefits derived from cooperation and on the game theoretic structures under which cooperation may arise; they have until now, however, neglected to study state responsibility and, especially, its different forms of apportionment when responsibility is shared.[3] I submit that this is a crucial variable for understanding why cooperation arises (or not), since it impacts upon the propensity to cooperate in the first place.

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[1] Public goods are non-excludable and non-rivalrous. Once provided, no country can be preventing from enjoying a public good, and nor can any country's enjoyment of the good impact upon the consumption opportunities of other countries. Classical examples are prevention of climate change, preventing the outbreak of a new contagious disease, or keeping weapons of mass destruction out of the hands of terrorists. Nevertheless, they differ in important respects and they cannot just be treated altogether; they have to be classified sensitive to the manner that they are supplied. S. Barrett, *Why Cooperate? The Incentive to Supply Public Goods* (Oxford: OUP, 2007), 1 et seq.

[2] See from a game-theoretic perspective T. Sandler, *Global Challenges. An Approach to Environmental, Political, and Economic Problems* (Cambridge: CUP, 1997) and Barrett, *Why Cooperate?*, n. 1.

[3] State responsibility is analysed from an economic contract theory perspective, but only questions of attribution and vicarious liability are treated as if states were firms: see E.A. Posner and A.O. Sykes, *Economic Foundations of International Law* (Cambridge: Harvard University Press, 2013), 113 et seq. They do not mention the problem of shared responsibility.

In most cases, cooperative structures may entail responsibility *vis-à-vis* other states or *vis-à-vis* third parties. Responsibilities in international law[4] can be shared between different states when they are responsible together for providing a public good or for preventing a public bad (such as climate change), between states and international organisations (such as peacekeeping), and between those and non-state actors (NSAs) (such as provision of vaccination in developing countries).[5] In all those constellations, violations of rights of subjects of international law or human rights can occur. In an increasing number of situations, multiple actors are responsible for harmful outcomes.

Legal scholars have analysed state responsibility from a doctrinal perspective, but the law remains opaque in situations of multiple states. As was stated 25 years ago, '[t]he law of multiple state responsibility is undeveloped. The scholarly literature is surprisingly devoid of reference to the circumstances or consequences of multiple state responsibility.'[6] This has not changed since then: '(t)he law, or at least its application, is currently in many respects uncertain, unsatisfactory, and even chaotic.'[7] Analysing the legal consequences of multiple state responsibility (state responsibility as *explanans*) is slowly gaining ground,[8] but what has not been analysed is how the norms on multiple state responsibility impact upon the willingness of states to cooperate,[9] and how this can be designed optimally to secure cooperation.[10] This Chapter attempts to fill that gap by using a political economy approach.[11]

[4] I define 'responsibility' as in P.A. Nollkaemper and D. Jacobs, 'Shared Responsibility in International Law: A Conceptual Framework' (2013) 34 MIJIL 359, at 365: '[w]e use the term "responsibility" to refer to *ex post facto* responsibility for contributions to injury.' I will use the term 'shared responsibility' (SR) more broadly then they do. They define SR by four main features (at 366 et seq.): 1) responsibility of multiple actors; 2) contribution to a single harmful outcome (whereby harm is understood as broadly encompassing all situations in which actors violate their obligations toward others); 3) shared responsibility *strictu sensu* refers to situations where the contributions of each individual cannot be attributed to them based on causation (I will not follow that, but understand it more broadly, since both situations – identification or no identification – are crucial for the analysis); and 4) 'the responsibility of two or more actors for their contribution to a particular outcome is distributed to them separately, rather than resting on them collectively' (e.g. in the form of an international organisation). I will also include the latter in my analysis, since the question here is under what circumstances states choose what; that is, all options need to be open.

[5] So-called hybrids: see K. Abbott and D. Snidal, 'International Regulation without International Government: Improving International Organization Performance through Orchestration' (2010) 5 RIO 315.

[6] J.E. Noyes and B.D. Smith, 'State Responsibility and the Principle of Joint and Several Liability' (1988) 13 YJIL 225.

[7] A. Orakhelashvili, 'Division of Reparation between Responsible Entities', in J. Crawford, et al. (eds.), *The Law of International Responsibility* (Oxford: OUP, 2010), 647, at 664.

[8] See the SHARES Project and the articles cited in this Chapter, as well as the other Chapters in this volume.

[9] Although social scientists have studied how different sanctioning mechanisms impact upon cooperation, since they affect *ex ante* expectations, they have not yet studied the impact of the sanctioning mechanism, known as state responsibility, on the willingness of states to cooperate.

[10] Nollkaemper and Jacobs, 'Shared Responsibility', n. 4, at 398, formulate this unerringly: '[t]he fundamental problem that will arise when relying on new primary rules or adjustment of rules of secondary responsibility is that the question is not so much whether this can be done, but rather in which direction it should be done. We submit that formulating a set of primary rules or new secondary principles raises fundamental conceptual,

Norms on state responsibilities are thus viewed as *explanans* for the cooperation of states (the *explanandum*).[12] I will analyse the rules and their effects, thus identifying the pay-offs for parties under different rules, and will then look at the incentives of the parties with respect to the initial stage of the game, and see which rules influence the propensity to cooperate.[13] I will also take into account the consequences of the rules on other goals of state responsibility and the arising trade-off. This kind of functional analysis addresses the issue of how we get to the optimal state responsibility mechanism (normative, depending on the identified goals of state responsibility), with a special consideration of the problem of the participation constraint of states[14] (i.e. whether they would enter into cooperation in the first place).

This Chapter focuses on questions of shared responsibility which are captured in Article 47 of the Articles on State Responsibility (ARSIWA).[15] Article 47 is unclear about how responsibility is apportioned. The legal possibility of having one state responsible for the whole harm is embedded in the ARSIWA, under which responsibility can arise solely due to an attributed international wrongful act (responsibility of conduct). The allocation of responsibility thus poses the biggest problem, since causality and/or behaviour is not easily observable or verifiable by the other states or a third party. In principle, there are five possibilities: first, no state (or international organisation) is held responsible (e.g. because there is immunity); second, a state is responsible for the whole damage, no matter how large their part in the contribution (independent responsibility); third, they are responsible only for the part that is attributed to them (proportional or several-only responsibility);[16] fourth, all

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methodological, and political challenges. Given the normative implications of alternatives, formulating principles on shared responsibility can hardly be conceived as merely a technical exercise. It would be intellectually unsatisfactory, akin to adding floors to a building without considering its foundations.'

[11] By political economy, I mean to study the 'why' questions (why we have institutions, independent courts, or the laws of responsibility) using as explanatory variables the 'who' questions (who are the actors – legislators, executives, judges, interest groups – that participate in shaping the law) and 'what' motivates them (their preferences) on the one hand and on their constraints (power, resources, given institutions and law etc.) on the other hand. A change of the behaviour is attributed to changes in the constraints. In this given case, the question is how different norms of state responsibility impact upon the willingness of states to cooperate.

[12] Similar to economic contract theory, which asks what contracts rational parties would write in order to generate efficient outcomes. For an international law application, see R.E. Scott and P.B. Stephan, *The Limits of Leviathan. Contract Theory and the Enforcement of International Law* (Cambridge: CUP, 2006).

[13] In an equation, this would look like the following: propensity to cooperate = f (norms on state responsibility, game played, factual problem to be solved, etc.).

[14] This is a term from economic contract theory denoting the cost-benefit calculus of an actor as to whether or not to cooperate.

[15] Articles on the Responsibility of States for Intentionally Wrongful Acts, ILC *Yearbook* 2001/II(2) (ARSIWA).

[16] Proportional liability means that each defendant is only held responsible for their proportionate share of the loss, however the criterion of attribution is defined. If, e.g., causality is the criterion and you have caused 10 per cent of the loss, you will only be responsible for that 10 per cent. The difference from the other rules is simple: under proportional liability each liable defendant is responsible only for the proportion of the loss or damage that a court determines is just, taking into account each defendant's relative level of comparative responsibility;

states are jointly and severally liable;[17] and fifth, they assume vicarious responsibility if acting through an international organisation (this is partially captured by the International Law Commission (ILC) Articles on the Responsibility of International Organizations (ARIO)).[18]

These solutions can be viewed from two perspectives. On the one hand, they can be viewed from the perspective of states that do not want to be held responsible for acts (or omissions) they did not commit (participation constraint of states), as has been held unerringly by the European Court of Human Rights (ECtHR) (which stated that responsibility may lead to non-cooperation in peacekeeping missions).[19] On the other hand, they can be viewed from the perspective of the injured party. From the victims' point of view, it is always better to have joint and several liability (JSL) of the different actors. Not only does one not need to figure out exactly who is responsible (which is sometimes quite a tedious task, even for lawyers), but chances are that there is jurisdiction of some court on the issue and no immunities[20] (holding international actors responsible is difficult enough, and holding several actors responsible together rarely happens). In short, the risk of verification of who is responsible, the risk of insolvency, and so on, is shifted to the injurers. Nevertheless, JSL is not what is necessarily observed in international law. Also, it impacts upon the propensity of states to cooperate. How do the other possibilities fare? The best solution in most cases, and which may even lead to cooperation as a dominant strategy under certain circumstances, is

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under joint and several liability (JSL), the defendant is responsible for the whole harm but can ask other contributors to reimburse; under independent responsibility, the latter possibility does not necessarily exist.

[17] JSL is most often compared or contrasted with an alternative rule usually called 'proportional liability' (or several only), on the one hand, or independent responsibility, on the other.

[18] Articles on the Responsibility of International Organizations, ILC Report on the work of its sixty-third session, UNGAOR 66th Sess., Supp. No. 10, UN Doc. A/66/10 (2011) (ARIO).

[19] *Agim Behrami and Bekir Behrami v. France and Ruzhdi Saramati v. France Germany and Norway*, App. No. 71412/01 and App. No. 78166/01 (ECtHR, 2 May 2007) (joint admissibility decision), para. 111 (Polish Government): '[a] finding that States were severally liable for participating in peacekeeping and democracy-building missions would have a devastating effect on such missions notably as regards the States' willingness to participate in such missions which result would run counter to the values of the UN Charter, the Statute of the Council of Europe and the Convention.' See also paras. 90, 94, and 101 (noting the submissions and oral statements of Norway, France, and Denmark). For a critical discussion see T. Dannenbaum, 'Translating the Standard of Effective Control into a System of Effective Accountability: How Liability Should be Apportioned for Violations of Human Rights by Member State Troop Contingents Serving as United Nations Peacekeepers' (2010) 51 Harv ILJ 113 at 184, 185: 'it is unclear that the expected cost of potential rights violation liability would be enough to offset the benefits they currently reap from participating in peacekeeping missions'. For states, it is plausible that they do not want to assume responsibility neither *ex ante* nor *ex post*. For victims, one may argue that they prefer *ex ante* no responsibility fearing that otherwise states would not provide the public good (e.g. the peacekeeping mission). They might (subjectively) think they will not be hurt (e.g. somebody in a country where a peacekeeping mission arrives). But a rational individual (as assumed here), will always include the probability of being hurt against the utility of the cooperative venture by states.

[20] See for the problems of process and jurisdiction Noyes and Smith, 'State Responsibility and the Principle of Joint and Several Liability', n. 6, 231 et seq., as well as Nollkaemper and Jacobs, 'Shared Responsibility', n. 4, 430 et seq.

proportional (or several only) responsibility, as compared with no, or independent, responsibility. JSL, from this perspective, lies in between independent and proportional responsibility, but it fares best from a victim's perspective.

Section 2 asks what goals a responsibility regime is intended to achieve. State responsibility, for example, modifies if and how a victim (a third party) can get compensation. Only clarity on those goals will allow us to conduct a comparative institutional analysis on the question of which responsibility regimes are adequate for certain problems and what trade-offs between different responsibility goals arise. Section 3 analyses how the norms on state responsibility currently accommodate multiple actors. The ARSIWA will be at the forefront of the discussion, since they are the default rules if no special treaty regime exists. Nevertheless, the current institutional framework cannot ignore the primary rules that are applicable: both primary and secondary norms are deeply intertwined when setting incentives for states. I will then describe the possible games being played by states when cooperating to provide public goods or to prevent public bads. The question is whether two or more states will cooperate under different apportionment systems in state responsibility. I will compare five such systems: no responsibility, proportionality (or several) responsibility, independent responsibility, JSL, and draw parallels for responsibility when states act through an international organisation. Game theory shows under which game a particular attribution role fares best to foster cooperation. This gives theoretical guidance on Article 47 of the ARSIWA, also for law-application (section 4). Section 5 will, first, elaborate on hypotheses on the circumstances under which states may assume joint and several liability, which is the best solution from a victim's point of view; second, make suggestions on how to overcome trust and commitment problems that might be responsible for the currently unsatisfactory state of state responsibility; and third, suggest other solutions where this might not be possible. Section 6 concludes.

2. Goals of the responsibility regime

Theories on responsibility (including state responsibility) can be analytical or normative, but this distinction is not clear-cut: whenever we try to understand why we have a certain regime in the first place (analytical; explanation of existing rules), those theories can be criticised or

confirmed from a normative perspective.[21] Although normatively certain goals might be desirable (e.g. full compensation of harm), they might not be achievable because of the participation constraint of states. Thus, from a functional perspective, the question is under what circumstances states will agree to what kind of responsibility, taking the incentives of states to participate in cooperative ventures into account (this is different from municipal systems, where liability or responsibility norms can be imposed and enforced).

An important distinction cuts across, namely whether goals of responsibility are instrumental or non-instrumental.[22] Instrumental theories would look at the underlying problems to be solved by responsibility rules, especially how cost allocation (in a broad sense) should be done. This, in turn, depends on the goals that should be achieved by the cost-allocation regime: costs can be allocated efficiently (such as to the cheapest cost avoider[23] or the cheapest 'insurer'),[24] or fairly (to those who contributed most to the violation of international law or to the harm).[25] In international law, one important additional factor is the probability that states may consent to the rules – otherwise no cooperation would take place.

In contrast, non-instrumental theories posit that responsibility is better understood as a way of giving expression to certain moral or political principles (such as rights, duties, redress).[26] Two duties are commonly formulated. Duties of the first order are *duties not to injure*. These duties establish norms of conduct (primary rules in international law). Duties of the second order are *duties of repair* (secondary rules; that is, state responsibility norms). Instrumental and non-instrumental goals are not disconnected: the imposition of duties creates incentives if the duty is somehow entrenched with consequences.[27]

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[21] J.L. Coleman and G. Mendlow, 'Theories of Tort Law' in E.N. Zalta (ed.), SEP (Fall 2010 edition), avaliable at http://plato.stanford.edu/ (last accessed 5 June 2014).

[22] Ibid., at section 1.3.2. Whereas normative or philosophical approaches look for grounds for duties or rights, an instrumental perspective asks which duties we should have in order to have good consequences. For an excellent treatment of moral duties in shared responsibility constellations, see L. May, *Sharing Responsibility* (Chicago: Chicago University Press, 1992).

[23] R.H. Coase, 'The Problem of Social Cost' (1960) 3 JLE 1.

[24] G. Calabresi, *The Costs of Accidents, A Legal and Economic Analysis* (New Haven: Yale University Press, 1970), at 303 et seq.

[25] D. Rosenberg, 'Casual Connection in Mass Exposure Cases: A "Public Law" Vision of the Tort System' (1984) 97 Harv LR 849 at 858: '[i]ndividualized determination of the causal connection also comports with deeply rooted notions of moral responsibility and just compensation.'

[26] This ties in with what Nollkaemper and Jacobs, 'Shared Responsibility', n. 4, at 372 et seq. call the 'moralization' of international law.

[27] Those can be legal or non-legal, e.g. reputational; see extensively R. Brewster, 'Reputation in International Relations and International Law', in J.L. Dunhoff and M.A. Pollack (eds.), *Interdisciplinary Perspectives on International Law and International Relations. The State of the Art* (Cambridge: CUP, 2013), 524.

We can then determine several goals of state responsibility. The first is reparation of the harm done (non-instrumental). Next are the preservation of peace via regulating the consequences of violations of international law; deterrence through the setting of incentives to adhere to international law and thereby reducing norm violations; loss allocation (that is, rational distribution of losses either between victims and responsible states or between different responsible subjects of international law); and administrative efficiency (that is, responsibility rules that are efficient and workable, and accessible for the victims). Last but not least, if the regime is a common enterprise for the common good (such as peacekeeping missions), the goal is to secure the cooperation of the states involved.[28] Note that if cooperation is not desired because it involves an unlawful activity in the first place, such as undertaking a war or an act of aggression, all arguments concerning the responsibility rules are reversed: the rule should be such that it hinders cooperation, i.e. independent responsibility fares best.[29]

In short, there are three main goals: first, to compensate the injured parties; second, to deter states from engaging in harmful actions in the future; and third, to secure international cooperation. Only the first two are usually mentioned in the legal literature;[30] the third is neglected – wrongly, in my opinion. Those goals cannot easily be achieved simultaneously. As with reservations to treaties, the trade-off between two principles needs to be kept in mind: on the one hand, the need of the international community to have states participating in treaties or joint actions (universality), and on the other hand, the integrity of the legal system by holding states responsible, and upholding the international rule of law by guaranteeing compensation of victims. In section 4, the Chapter will show under which institutional and factual conditions the trade-off occurs and how it could be mitigated. This trade-off helps, in my view, to understand the norms and the (limited)[31] international case law currently existing for state responsibility. It is also connected to the understanding of the mixed public/private nature of state responsibility.[32] The traditional private understanding that any injury caused

[28] Dannenbaum, 'Translating the Standard of Effective Control', n. 19, at 114 proposes a 'liability framework (which) better realizes the fundamental goal of attributing liability to the entity most responsible for the wrongdoing, thus structuring incentives so as to minimize violations, while simultaneously expanding the access of victims to juridical recourse and proper remedy'.

[29] Cf. C. Chinkin, 'The Continuing Occupation? Issues of Joint and Several Liability and Effective Control', in P. Shiner and A. Williams (eds.), *The Iraq War and International Law* (Oxford: Hart, 2008), 160.

[30] See, e.g., Orakhelashvili, 'Division of Reparation between Responsible Entities', n. 7, at 647: '[t]he law is in field is called on to find the proper Balance between two legitimate interests. The first is that of the injured entity in the effective redress for the wrongful act and its consequences (…) The question of general prevention is also relevant.'

[31] J. Crawford, *State Responsibility* (Cambridge: CUP, 2013), at 326: 'noticeable lack of judicial and arbitral authorities'.

[32] Nollkaemper and Jacobs, 'Shared Responsibility', n. 4, at 398 et seq.

gives rise to an obligation of reparation is well entrenched in international law. The famous dictum of the Permanent Court of International Justice echoes this: 'it is a principle of international law, and even a general conception of law, that any breach of an engagement involves an obligation to make reparation.'[33] This amounts to a private law approach,[34] which is related to the traditional concept of sovereignty and inter-state relationships, serving the interests of the respective nation-state, and securing the first goal: compensation for the injured parties.

But how does this connect to the problems we are facing with the global public good? Is the private law approach still adequate? The private law 'repair shop' for those problems is JSL – holding on to the principle of reparation of harm done that must be compensated, since JSL is always better from a victim's perspective.[35] But can the other two goals (deterrence and cooperation) be captured by other incentives for norm conformity of states? The ARSIWA have moved in this direction. Pellet talks about a 'revolution' in international law.[36] Damage is not a prerequisite for responsibility; rather it is necessary and sufficient under Articles 1 and 2 of the ARSIWA that only two elements are present: breach and attribution. This imposes a responsibility of conduct, not result (as in administrative law, where a fine can be imposed for crossing a red light without injuring anyone). This move towards an 'objectivization'[37] of international responsibility (or the public law dimension)[38] stresses the second goal: the deterrence or incentive function. Although this goal is surely desirable, it produces potential trade-offs with securing the third goal – the cooperation of states, especially in public good constellations. Depending on the responsibility rule chosen, states will be more or less willing to cooperate.

[33] *Factory at Chorzów (Germany v. Poland)*, Merits, Claim for Indemnity, Judgment No. 13, 1928 PCIJ Series A - No. 17 at 4, 29.
[34] A. Pellet, 'The Definition of Responsibility in International Law', in J. Crawford, et al. (eds.), *The Law of International Responsibility* (Oxford: OUP, 2010), 3, at 5, 11 et seq.
[35] Nollkaemper and Jacobs, 'Shared Responsibility', n. 4, at 397.
[36] Pellet, 'The Definition of Responsibility in International Law', n. 34, at 9.
[37] Ibid., at 8, 15, and 9: 'international law must be respected independently of the consequences of a violation and any breach entails the responsibility of its author, while the content of such responsibility, its concrete effects, varies according to whether or not the internationally wrongful act has caused damage, and according to the nature of the norm breached'.
[38] Nollkaemper and Jacobs, 'Shared Responsibility', n. 4, at 401 et seq.

3. State responsibility *de lege lata*

Every action (or omission) carries the danger of responsibility, governed by the ARSIWA (or the ARIO) as default rules. They are applicable to the extent that there is no special treaty regime governing the (harmful) activities in question.[39] In the ARSIWA, the term 'responsibility' is used for wrongful action,[40] whereas liability is usually used for lawful action resulting in harm.[41] The current law of state responsibility is rather opaque, especially in instances of joint cooperation of states (and/or international organisations or other actors). The general principle of state responsibility is independent responsibility of states, although the ARSIWA contain several exceptions to it.[42] Article 47 of the ARSIWA[43] deals with the situation of a plurality of responsible states in respect of the *same wrongful act*[44] and starts from the general principle that 'each State is separately responsible for the conduct attributable to it, and that responsibility is not diminished or reduced by the fact that one or more other States are also responsible for the same act.'[45] Thus, a situation can arise where only one state is held responsible for the violation (conduct), although many states contributed to it: it could be held responsible for the whole harm (result), independently of its contribution.

The Commentaries specify that the responsibility of a state should not be reduced even if another state is also involved in the perpetration of the same wrongful act.[46] It is thus

[39] They also do not distinguish between the source of obligation breached, be it crime, contract, or tort. Cf. Crawford, *State Responsibility*, n. 31, at 51 and J. Crawford, 'The System of International Responsibility', in J. Crawford, et al. (eds.), *The Law of International Responsibility* (Oxford: OUP, 2010), 17, at 21 et seq. Cf. *Case concerning the difference between New Zealand and France concerning the interpretation or application of two agreements concluded on 9 July 1986 between the two States and which related to the problems arising from the Rainbow Warrior Affair*, Decision, (1990) 20 RIAA 217 , at 251, para. 75, and the ICJ in *Gabčíkovo-Nagymaros Project (Hungary /Slovakia)*, Judgment, ICJ Reports 1997, 7, at 38-39, paras. 46-48.

[40] Cf. Article 2 ARSIWA, n. 15.

[41] For a juxtaposition, see Pellet, 'The Definition of Responsibility in International Law', n. 34, at 10 et seq.

[42] Articles 16-18 ARSIWA, n. 15. Orakhelashvili, 'Division of Reparation between Responsible Entities', n. 7, at 650 et seq.

[43] Cf. Article 47 ARSIWA, n. 15, which reads: '1. Where several States are responsible for the same internationally wrongful act, the responsibility of each State may be invoked in relation to that act.
2. Paragraph 1: (a) does not permit any injured State to recover, by way of compensation, more than the damage it has suffered; (b) is without prejudice to any right of recourse against the other responsible States.'
Article 48 (1) ARIO, n. 18, contains a similar provision: 'Where an international organization and one or more States or other international organizations are responsible for the same internationally wrongful act, the responsibility of each State or organization may be invoked in relation to that act.'

[44] Commentary to the Articles on the Responsibility of States for Internationally Wrongful Acts, ILC *Yearbook* 2001/II(2) (ARSIWA Commentary), Article 41, para. 1.

[45] Ibid., Commentary to Article 47, para. 1; Crawford, *State Responsibility*, n. 31, at 327.

[46] Ibid., Commentary to Article 47, para. 1; and Orakhelashvili, 'Division of Reparation between Responsible Entities', n. 7, at 657.

conceptually based on 'individual' or 'independent' state responsibility,[47] where each state's responsibility is determined separately, being based on a concept of an international order where states (and international organisations) act alongside, rather than together, in intermingled ways. Therefore, 'principles of international law that correspond to the needs of an era characterized by joint and coordinated, rather than independent, action'[48] are still largely missing. One of the main problems is that 'there are fundamental problems with defining joint responsibility in terms of the "same wrongful act" [conduct, AvA] rather than (as is done in some domestic systems) in terms of the "same injury" [result, AvA].'[49] This is especially painful in situations of global public goods, be they created jointly or independently, since their non-provision leads to the 'same injury', but every state may have contributed in part. Nevertheless, Article 47 of the ARSIWA is in principle open to any attribution: it neither explicitly recognises a rule of JSR, nor 'does it exclude the possibility that two or more States will be responsible for the same internationally wrongful act',[50] and thus responsibility could also be partitioned proportionally. Following Nollkaemper and Jacobs, shared responsibility *strictu sensu* is defined as situations in which individual causal contributions cannot be determined, and the allocation of responsibility thus cannot be fully based on principles of individual responsibility as previewed in the ARSIWA (and, potentially, independent responsibility).[51]

Can international law borrow from municipal law for the solution to the problem? Here, opinions in the doctrine are divided, but from a functional perspective, which is used here, it makes a lot of sense to consider solutions found in municipal law to solve similar problem structures.[52] This is, as a first step, just a theoretical consideration; in deciding whether those solutions can be considered common legal doctrine, drawing on municipal tort law, we need

[47] I follow Nollkaemper and Jacobs, 'Shared Responsibility', n. 4, at 381: '[u]nder the principle of independent responsibility, the state or international organization (as the case may be) is responsible for its own conduct and its own wrongs. That is, it is responsible for the conduct that is attributable to it and that is deemed in breach of its obligations.'
[48] Ibid., at 361.
[49] Ibid., at 396.
[50] ARSIWA Commentary to Article 47, para. 6, n. 44; Crawford, *State Responsibility*, n. 31, at 331.
[51] Ibid.; and Crawford, ibid., at 367.
[52] See e.g. *Oil Platforms (Islamic Republic of Iran v. United States of America)*, Judgment, ICJ Reports 2003, 161, at 324 (Judge Simma, Separate Opinion); R. Alford, 'Apportioning Responsibility Among Joint Tortfeasors for International Law Violations' (2011) 38 Pepp L Rev 233; and Nollkaemper and Jacobs, 'Shared Responsibility', n. 4. Against the use of municipal terms such as 'joint and several', 'joint', 'solidary' (solidaire), cf. I. Brownlie, *Principles of Public International Law*, 6th edn (Oxford: OUP, 2003), at 440, who finds municipal analogies 'unhelpful'. Also, the ILC cautions against the uncritical use of municipal concepts in international law: see ARSIWA Commentary, Article 47, para. 3, n. 44: 'analogies must be applied with care'. However, insofar as the traditions of some countries may reflect general principles of law, they are of relevance in the interpretative process as a source of law under Article 38 of the ICJ Statute.

to differentiate between concerted action and cumulative action.[53] Concerted action describes circumstances in which states engage in common or joint conduct which breaches an international obligation. For example, two states may participate in a commercial joint venture that causes environmental damage, or joint troops may commit a breach of humanitarian law. Those instances are called *concerted action*. Independent action, by contrast, describes situations where states breach obligations with respect to a single event independently. Those cases may arise, for example, in environmental law where states do not adhere to fishing quotas or emission standards set by an international treaty. Those instances are called *cumulative action*.[54] Here, the injured party is in principle able to make claims against each entity, since these entities acted independently from each another. Nevertheless, if the cause of the damage cannot be divided amongst them (for instance because causality is not observable), any of the tortfeasors can be held fully responsible – just like in the case of tortfeasors acting in concert. It would thus not matter whether A *and* B were acting together or whether A *or* B acted when causality cannot be clearly assigned, although that might make a difference from the perspective of a state considering whether to cooperate in the first place. The ARSIWA do not distinguish between cumulative and concerted action.[55]

In the constellation of public goods, states rarely act in isolation, but they can act cumulatively or in concert.[56] Theoretically, there are four possibilities of designing responsibility of cooperating states for an unsatisfactory outcome (that is, if the public good is not provided or if third parties are hurt). First, states are assigned independent responsibility, and one state might need to pay for the whole damage, even if a plurality of states was

[53] Noyes and Smith, 'State Responsibility and the Principle of Joint and Several Liability', n. 6, at 228 et seq.

[54] Here, the harm results from a multiplicity of actions. Although each of the actions has contributed cumulatively (like overfishing or CO_2 emissions), none alone would have caused the harm to the same extent.

[55] Cf. ARSIWA Commentary, Article 47, para. 2, n. 44: '[f]or example two or more States might combine in carrying out together an internationally wrongful act in circumstances where they may be regarded as acting jointly in respect of the entire operation. In that case the injured State can hold *each responsible State to account for the wrongful conduct as a whole*. Or two States may act through a common organ which carries out the conduct in question, e.g. a joint authority responsible for the management of a boundary river. Or one State may direct and control another State in the commission of the same internationally wrongful act by the latter, such that both are responsible for the act.' (emphasis added by the author).

[56] Crawford, *State Responsibility*, n. 31, at 325, footnote 1, lists several possibilities in which the combined action of more than one state might result in wrongful conduct: joint conduct, conduct of several states separately causing aspects of the same harm or injury, action via a common organ, agency, independently wrongful conduct involving another state, incitement of a wrongful act, voluntary assistance in the commission of a wrongful act (complicity, Article 16 ARSIWA, n. 15). Cf. for the latter, e.g. the complicity in the intervention in Iraq (presuming it was wrongful), see H.P. Aust, *Complicity and the Law of State Responsibility* (Cambridge: CUP, 2011); G. Nolte and H.P. Aust, 'Equivocal Helpers – Complicit States, Mixed Messages and International Law' (2009) 58 ICLQ 1.

engaged in the damaging action/omission.[57] This is the predominant situation of state responsibility as codified in the ARSIWA. Second, if there are multiple tortfeasors, responsibility could be attributed to all via JSL. Third, the responsibility may be attributed proportionally (several only). Fourth, if states act via an international organisation (as in the case of some peacekeeping missions), the acts can be attributed to the international organisation, which is held responsible (but it then may recoup damages either *pro rata* or from the state responsible).[58] All of them have different consequences for the propensity to cooperate. We will shortly describe how those are used *de lege lata*.

3.1 Independent responsibility

The general principle of allocation of responsibility in joint actions is that each state is separately responsible, and this responsibility is not reduced or diminished due to the fact that the state was acting jointly with other states.[59] The ARSIWA Commentaries justify this with the general principle of responsibility in international law as stated in Article 2 of the ARSIWA, where each state is separately responsible for wrongful conduct attributable to it, not the damage done. In the view of the ILC, the principle of independent responsibility reflects the position under general international law that, in the absence of an agreement to the contrary,[60] the general principle must be such that each state can be sued for the whole damage. The ILC draws on the International Court of Justice (ICJ or Court) case *Certain Phosphate Lands in Nauru*,[61] where Australia, the sole respondent, had administered Nauru as a trust territory under the Trusteeship Agreement also on behalf of other states (New Zealand and the United Kingdom). Australia argued that it could not be sued alone by Nauru, but only jointly with the other two states concerned. The Court dismissed this argument[62] but left open

[57] Omissions are included in the definition of an 'internationally wrongful act' in Article 1 ARSIWA: see ARSIWA Commentary, Article 1, para. 14, n. 44, and Crawford, *State Responsibility*, n. 31, at 49.
[58] The latter is problematic because of the immunities enjoyed by international organisations in courts, but for the moment, I would like to abstain from this difficulty.
[59] Brownlie, *Principles of Public International Law*, n. 52, at 441.
[60] ARSIWA Commentary, Article 47, para. 3, n. 44.
[61] *Certain Phosphate Lands in Nauru (Nauru v. Australia)*, Preliminary Objections, ICJ Reports 1992, 240.
[62] Ibid., at 258-259, para. 48. 'Australia has raised the question whether the liability of the three states would be 'joint and several' (solidaire), so that any one of the three would be liable to make full reparation for damage flowing from any breach of the obligations (…) and not merely one third or some other proportionate share. This (…) is independent of the questions whether Australia can be sued alone. The Court does not consider that any reason has been shown why a claim brought against only one of the three States should be declared inadmissible *in limine litis* merely because that claim raises questions of the administration of the Territory, which was shared with two other States. It cannot be denied that Australia had obligations under the Trusteeship Agreement, in its

the question of 'whether reparation would be due from Australia, if found responsible, for the whole or only for part of the damage Nauru alleges it has suffered, regard being had to the characteristics of the Mandate and Trusteeship Systems and, in particular, the special role played by Australia in the administration of the Territory.'[63] The case was later settled, so there is no decision on apportionment.[64]

3.2 Proportional responsibility

Proportional (or several only) responsibility is not excluded by Article 47 of the ARSIWA, even though it is not explicitly mentioned anywhere. As Nollkaemper and Jacobs state, '[t]he issue has not been explored and to our knowledge has not been raised in practice.'[65] Proportional responsibility depends crucially on the criteria of attribution, since proportion always needs a relator (in proportion to what?). The criteria for attribution are themselves an unclear notion in international law.[66] Those rules serve the purpose of legal certainty in terms of the allocation of the responsibility in two ways: the acting state knows what it will be held responsible for, and the injured parties should then know from whom to claim reparations.[67] Those criteria can be capacity,[68] contribution, control,[69] and causation[70] (amongst others). The allocation of a proportion can be done in the phase of finding responsibility in the first place under Article 2 of the ARSIWA, or at a later stage of reparation, if responsibility is confirmed for a plurality of states but reparations (e.g. damages) have to be allocated.

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capacity as one of the three States forming the Administering Authority, and there is nothing in the character of that Agreement which debars the Court from considering a claim of a breach of those obligations by Australia.'

[63] Ibid., at 262, para. 56.

[64] Australia agreed to pay the full amount of Nauru's claim and the other governments contributed. See Agreement between Australia and the Republic of Nauru for the Settlement of the Case in the International Court of Justice concerning *Certain Phosphate Lands in Nauru*, Nauru, 10 August 1993, in force 20 August 1993, 1770 UNTS 379. This amounts then to a kind of JSL.

[65] Nollkaemper and Jacobs, 'Shared Responsibility', n. 4, at 429.

[66] D. Caron, 'The Basis of Responsibility: Attribution and Other Transsubstantive Rules', in R.B. Lillich and D.B. Magraw (eds.), *The Iran-United States Claims Tribunal: Its Contribution to the Law of State Responsibility* (Ardsley: Transnational Publishers, 1998), 109. See also F. Messineo, 'Attribution of Conduct', in P.A. Nollkaemper & I. Plakokefalos (eds.), *Principles of Shared Responsibility in International Law: An Appraisal of the State of the Art* (Cambridge: CUP, 2014) and J.D. Fry, 'Attribution of Responsibility', in P.A. Nollkaemper & I. Plakokefalos (eds.), *Principles of Shared Responsibility in International Law: An Appraisal of the State of the Art* (Cambridge: CUP, 2014).

[67] As here, Orakhelashvili, 'Division of Reparation between Responsible Entities', n. 7, at 649.

[68] As e.g. in climate change discussions.

[69] Mainly relevant in peacekeeping missions.

[70] See Caron, 'The Basis of Responsibility', n. 66, at 153: '[t]he relationship between causation and attribution is clear in the sense that causation serves as a limit on the scope of State Responsibility for attributable acts.'

Let us turn to the first phase. Causality foremost can restrict responsibility under the ARSIWA. Causation arises in the work of the ILC as a conceptual limit to be employed in ascertaining the quantum of compensation owed to the injured state. Article 31(1) of the ARSIWA deals with the question of a causal link between the internationally wrongful act and the injury. It is only '[i]njury (…) caused by the internationally wrongful act of a State' for which full reparation must be made. This phrase clarifies that 'the subject matter of reparation is the injury resulting from and ascribable to the wrongful act, rather than any and all consequences flowing from an internationally wrongful act'.[71] Causality is a necessary and thus confining, but not a sufficient, condition for responsibility. The allocation of injury or loss to a wrongful act is a normative and not only a historical or causal process.[72] Thus, whilst causality can set out limits to responsibility and also function as a criterion of attribution to allocate responsibility proportionally, this is not always possible to determine causality, and other criteria need to be used.[73] Which one that is depends on the issue area, and should ideally be dealt with in primary law.[74]

The proportionality rule is nevertheless in principle ideally suited to the task of resolving the problem of causal indeterminacy. Under this rule, the expected responsibility confronting the state equals the losses attributable to its illegal conduct. By giving states precisely the incentive needed to induce them to take optimal care, such a rule enables the system to achieve its optimal deterrence objective.[75] As will be shown, it is also the rule that best fosters cooperation between states.

Proportional responsibility can also be constructed in such a way that it comes into play only at the second stage, the allocation of losses. Here, in the first stage, independent responsibility would be found, but in the second stage, a state would only be responsible for the part attributed to it (via causality or otherwise).

[71] ARSIWA Commentary, Article 31, para. 9, n. 44.
[72] ARSIWA Commentary, Article 31, para. 10, n. 44.
[73] As has been noted by Caron, 'The Basis of Responsibility', n. 66, at 153, 'causation as an aspect of State responsibility is, relative to municipal law developments, an undeveloped area of international law'.
[74] In peacekeeping missions, it could be any form of command and control criterion; in climate change, it could be CO_2 emissions.
[75] For details see Rosenberg, 'Casual Connection in Mass Exposure Cases', n. 25, for tort litigation in the United States. His analysis is equally valid for public international law.

3.3 Joint and several liability

Overall, explicit JSL is scarce in international law.[76] Article 47 of the ARSIWA allows JSL, however, and thus independent responsibility can turn into JSL if there is a way to recover from other responsible states. The large absence of explicit JSL in international law (contrary to municipal law) is often deplored in legal scholarship.[77] This is certainly correct from a compensation perspective, since for any victim (state or non-state) it is much easier to recoup reparations from one single state not only for reasons of procedure and jurisdiction, but also because it might be factually difficult for a victim to identify the tortfeasor due to unclear causality or an asymmetric information account of the victim.

Instances for constructing a general principle of JSL have not been followed up until now, although Judge Bruno Simma elaborated on JSL in his minority opinion in the *Oil Platforms* case.[78] In this case, the United States alleged that Iran had violated its treaty obligations by laying mines in the Persian Gulf during the decade long Iran-Iraq war.[79] It was unclear who laid the mines. Judge Simma concluded, after a comparative municipal tort law analysis, that the 'principle of joint-and several responsibility (…) can properly be regarded as a "general principle of law" within the meaning of Article 38, paragraph 1 (c), of the Court's Statute.'[80] The majority opinion did not elaborate on that point.[81]

In the *Eurotunnel* Arbitration,[82] the question was whether the United Kingdom and France could be jointly and severally liable for not having taken measures against the incursion of illegal immigrants using the Channel Tunnel and causing damage to its operators (the Channel Tunnel Group Ltd. and France Manche S.A.).[83] Whereas France held that 'if there is

[76] The ECtHR's jurisprudence, however, has some cases with JSL, e.g. *Ilaşcu and others v. Moldova and Russia*, App. No. 48787/99 (ECtHR, 8 July 2004).
[77] Brownlie, *Principles of Public International Law*, n. 52, at 440: '[a] rule of joint and several liability in delict should certainly exist as a matter of principle, but practice is scarce.'
[78] *Oil Platforms*, n. 52, at 324 (Judge Simma, Separate Opinion).
[79] Ibid., at 172, 174 (majority opinion).
[80] Ibid., at 358, para. 74 (Judge Simma, Separate Opinion).
[81] Ibid., at 218, para. 124 (majority opinion).
[82] *Eurotunnel Arbitration (The Channel Tunnel Group Ltd & France-Manche S.A. v. the Secretary of State for Transport of the Government of the United Kingdom of Great Britain and Northern Ireland and le ministre de l'équipement, des transports, de l'aménagement du territoire, du tourisme et de la mer du Gouvernement de la République française)*, Partial Award, (2007) 132 ILR 1 (*Eurotunnel*).
[83] Ibid., para. 163: the claimants alleged that '[a]ny violation caused by the Governments' respective acts and omissions in the context of policing, security and frontier controls should, in addition to engaging the specific responsibilities of the relevant Government, also be attributable to both Governments jointly since these actions are manifestations of the Governments' joint failure to co-operate and co-ordinate their actions in making appropriate provision in relation to policing, security and frontier controls.'

to be a responsibility that responsibility (...) has to be accepted jointly and severally',[84] the United Kingdom argued that 'there is no basis in international law for claims of joint liability or joint and several liability.'[85] Furthermore, it argued that an obligation of joint policing and coordinating the activities of the two states would 'invent(s) an obligation of result.'[86] Although the *Eurotunnel* tribunal found entitlement to damages in arbitration against the governments of France and the United Kingdom, the tribunal held, after looking at the contracts that were concluded (and thus not relying on the ARSIWA), that to 'the extent that the Claimants' case depends on the thesis of joint and several responsibility, i.e. the per se responsibility of one State for the acts of the other, it must fail.'[87]

Some instances are known, however, especially in treaty law, and they might serve as examples as to how to model JSL, even if it is absent in most treaties. A caveat should be mentioned though: the treaties usually deal with issues where strict liability is foreseen; that is, the action as such is lawful, whereas the ARSIWA deal with wrongful acts. The Convention on International Liability for Damage Caused by Space Objects (Liability Convention)[88] mentions JSL. In Article II, a launching state is strictly liable to pay compensation for damage caused on the surface of the earth or to aircraft in flight by its space object. When more states jointly launch a space object, they are jointly and severally responsible for any damage caused. Equally, a state from whose territory or facility a space object is launched is regarded as a participant in a joint launching.[89] Exoneration from strict liability (and therefore JSL) is only granted to the extent that a launching state establishes that the damage resulted from another state's gross negligence or from an intentional act or omission. Thus, in instances of JSL in lawful activities, damage is necessary: it thus imposes responsibility of result, not conduct. Clearly, those treaties are *lex specialis* to the ARSIWA; more so, since they deal with risky lawful activities.[90]

[84] Ibid., para. 170.
[85] Ibid., para. 171.
[86] Ibid., para. 172.
[87] Ibid., para. 187.
[88] Convention on the International Liability for Damage Caused by Space Objects, London, Moscow, and Washington D.C., 29 March 1972, in force 1 September 1972, 961 UNTS 187 (Liability Convention).
[89] Similarly, UN General Assembly Resolution UN Doc. A/RES/47/68 (1992), which proclaims 'Principles Relevant to the Use of Nuclear Power Sources in Outer Space', similarly provides for strict liability as well as joint and several liability, stating that '[w]henever two or more States jointly launch such an object, they shall be jointly and severally liable for any damage caused, in accordance with article V of the above-mentioned Convention' (at Principle 9).
[90] ARSIWA Commentary, Article 47, para. 5, n. 44.

Another treaty that mentions JSL is Article 6 to Annex IX of the United Nations Convention on the Law of the Sea (LOSC),[91] which provides for JSL of an international organisation and its member states. If attribution is not clear and not clarified, the international organisation will be liable together with the member states under JSL. Here, the risk of escaping responsibilities by making them murky is minimised, since the incentives for all to clarify the responsibilities are high. It is clear that this Article has been drawn with the European Union (EU) in mind – this is an international organisation where states are working closely together, and trust in each other is higher than in normal international organisations.

3.4 International organisations and states: sharing responsibility

It is generally agreed that the responsibility of international organisations is governed by the same general principles as those of states.[92] Often, states act through or with international organisations (and other NSAs), especially, but not only, in peacekeeping missions.[93] Here, the main problems discussed are, first, whether a direct exclusive responsibility of international organisations can be found;[94] second, whether the states are responsible alongside the international organisation (concurrent responsibility); and third, whether states are indirectly responsible for the international organisations (secondary responsibility). This is not the place to deal with these complicated issues in detail, so only some principles will be stated.

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[91] '1. Parties which have competence under article 5 of this Annex shall have responsibility for failure to comply with obligations or for any other violation of this Convention.
2. Any State Party may request an international organization or its member States which are States Parties for information as to who has responsibility in respect of any specific matter. The organization and the member States concerned shall provide this information. Failure to provide this information within a reasonable time or the provision of contradictory information shall result in joint and several liability.' United Nations Convention on the Law of the Sea, Montego Bay, 10 December 1982, in force 16 November 1994, 1833 UNTS 3 (LOSC).

[92] Orakhelashvili, 'Division of Reparation between Responsible Entities', n. 7, at 648. The ARIO also basically follow the ARSIWA.

[93] See extensively M. Hartwig, *Die Haftung der Mitgliedstaaten für Internationale Organisationen* (Berlin: Springer, 1993); R. Higgins, 'The Legal Consequences for Member States of the Non-Fulfilment by International Organizations of the Obligations Toward Third Parties' (1995) 66 AIDI (Session of Lisbonne, Vol. I) 249; M. Hirsch, *The Responsibility under International Law of International Organizations towards Third Parties: Some Basic Principles* (Dordrecht: Martinus Nijhoff, 1994); W. Meng, 'Internationale Organisationen im völkerrechtlichen Deliktsrecht' (1985) 45 ZaöRV 324-71; and K. Schmalenbach, *Die Haftung internationaler Organisationen* (Frankfurt am Main: Peter Lang, 2004).

[94] Governed now by the ARIO, which follow largely the same principles as the ARSIWA, but which left out the question of the responsibility of a state which is a member of an international organisation for a wrongful act committed by the international organisation: cf. Pellet, 'The Definition of Responsibility in International Law', n. 34, at 7.

Direct and exclusive responsibility of an international organisation leads to what municipal lawyers call 'vicarious liability'; that is, the organisation takes on all responsibility.[95] The topic of responsibility of an international organisation itself[96] versus indirect responsibility of its member states has been neglected for a long time. The issue first arose prominently in the *International Tin Council* (ITC) case.[97] The ITC was an international organisation founded by the International Tin Agreement in 1956 to stabilise international commodities prices (in this case, tin). It had assets for this purpose and could take out loans, but its legal personality was in dispute. In 1985 the ITC became insolvent and the creditors (among them, in particular, private banks and metal brokers) sought a repayment of the loans, not only from the ITC, but also from the member states, arguing that they were liable for the activities of the ITC (concurrently or secondary). In the end, it was held that the international organisation was solely responsible, and not its member states. The crucial factors here were, first, the legal personality of the international organisation; and second, the missing intention of the member states to be liable for the organisation, more than the actual interaction between states and the international organisation, or the harm done to its business partners.[98] Reformulated in economic terms, this hints at the implicit participation constraint of states taken into account by courts: states should not be liable if they did not consent to it in the first place. This potential shielding of states surely fosters the cooperation of states via international organisations, but it may also lead to an escape of responsibility, thereby impacting upon the first goal of reparation of harm, especially where the international organisation is insolvent, as in the *Tin Council* case. It has therefore been argued that '[j]ust as a state cannot escape its responsibility under international law by entrusting to another legal person the fulfilment of

[95] Actions of states are attributed to the international organisation following Article 4 et seq. of the ARIO, n. 18: '[t]here is an internationally wrongful act of an international organization when conduct consisting of an action or omission: (a) is attributable to that organization under international law; and (b) constitutes a breach of an international obligation of that organization.'

[96] This is the main subject of the ARIO.

[97] Several claims were brought against member states of the ITC. Most prominent were the cases in England: *J.H. Rayner (Mincing Lane) Ltd. v. Department of Trade and Industry and others*, Judgment of 24 June 1987, (1988) 77 ILR 56 (and related appeals); *Maclaine Watson & Co. Ltd. v. Department of Trade and Industry*, Judgment, 29 July 1987, (1989) 80 ILR 39; and *J.H. Rayner (Mincing Lane) Ltd. v. Department of Trade and Industry and others*, Decision on Appeal, 26 October 1989, United Kingdom House of Lords (1990) 81 ILR 670; See also the case before the *Maclaine Watson & Co. Ltd. v. Council and Commission of the European Communities* (Opinion of the Advocate General Darmon), European Court of Justice, Case C-241/87 (1994) 96 ILR 201. For details of the cases, see M. Hartwig, 'The International Tin Council (ITC)', in: Max Planck Encyclopedia of Public International Law (2011), online at http://opil.ouplaw.com/home/EPIL.

[98] Orakhelashvili, 'Division of Reparation between Responsible Entities', n. 7, at 656.

its international obligations, the partner states of a common interstate enterprise are jointly and severally responsible in international law for the acts of the enterprise.'[99]

After the *Tin Council* case, the responsibility of international organisations became more prominent.[100] It was argued that states are not liable for the actions of an international organisation solely by virtue of their membership in the international organisation.[101] After the North Atlantic Treaty Organization (NATO) Kosovo bombings, Yugoslavia sued Canada before the ICJ for the injuries it suffered. Although Canada is a member of NATO, it did not participate in the bombing campaign. Nonetheless, Yugoslavia argued that JSL could be imputed to Canada because of the integrated command structure of NATO.[102] The ICJ dismissed the case for lack of jurisdiction *prima facie*.

The most prominent and tricky example of joint responsibility between states and international organisations is peacekeeping. This is a highly complex system that cannot be explained in detail here.[103] I would like to highlight one case, however, which was thoroughly criticised by the legal community:[104] *Behrami* and *Saramati*.[105] The ECtHR denied responsibility of the states, holding only the international organisation responsible (in that case, the United Nations). In short, although the problem of immunity is impacting heavily on the first goal of international responsibility (that is, compensating the injured party – although

[99] I. Seidl-Hohenveldern, *Corporations In and Under International Law* (Cambridge: Grotius Publications, 1987), at 121. Similarly, Orakhelashvili, 'Division of Reparation between Responsible Entities', n. 7, at 662, holds that '[p]ersonality cannot be a veil for actions which are on their face covered by the organization's power but are in reality performed States (...) [T]he separate personality of international organizations should not result in immunizing States from responsibility for actions to which they have effectively contributed.'

[100] The Institute de Droit International, the ILC, and the International Law Association have been working on those issues.

[101] Article 6 of the Resolution of the Institute de Droit International of 1995 holds that: 'there is no general rule of international law whereby States members are, due solely to their membership, liable (…) for the obligations of an international organization of which they are members.' Article 62 of ARIO, n. 18, states that 'Article 62: Responsibility of a State member of an international organization for an internationally wrongful act of that organization 1. A State member of an international organization is responsible for an internationally wrongful act of that organization if: (a) it has accepted responsibility for that act towards the injured party; or (b) it has led the injured party to rely on its responsibility. 2. Any international responsibility of a State under paragraph 1 is presumed to be subsidiary.'

[102] *Legality of Use of Force (Yugoslavia v. Canada*), Request for the Indication of Provisional Measures, Transcript, CR 1999/27 (12 May 1999), at 10, available at: www.icj-cij.org (last accessed 5 June 2014). Cited from Alford, 'Apportioning Responsibility Among Joint Tortfeasors for International Law Violations', n. 52, at 238.

[103] See for details Dannenbaum, 'Translating the Standard of Effective Control', n. 19.

[104] E.g. M. Milanović and T. Papić, 'As Bad as it Gets: The European Court of Human Rights's *Behrami* and *Saramati* Decision and General International Law' (2009) 58 ICLQ 267 and A. Sari, 'Jurisdiction and International Responsibility in Peace Support Operations: The *Behrami* and *Saramati* Cases' (2008) 8 HRLR 151.

[105] See *Behrami* and *Saramati*, n. 19.

this can be partially mitigated through claims commissions),[106] in my view, one of the rationales of the decision should not be too easily dismissed. First, the participation constraint of states,[107] and second that international organisations may be the best informational risk bearer since they have (or can request) the information who was responsible. Victims have more problems identifying attribution, just as other states have more problems than the international organisation, if the international organisation has overall command. It would even help victims if there was only one subject of international law responsible. Although there is surely a problem with immunity, the repair shop for it should not be wrong apportionment.

With regard to the second problem, if states are responsible concurrently for the actions of an international organisation,[108] we can refer to the cases where several states acted together. In the *Tin Council* case, for example, if the arguments of the plaintiffs had been followed, the outcome would have been that the member states were jointly and severally liable for their concerted action (the common business undertaking), even though they had acted through an international organisation.[109] But JSL is not necessarily the proper scenario – it would depend on how the internal distribution of responsibility is handled, and on the characteristics of the joint undertaking. There is no difference in the game structure compared to a situation where states act without an international organisation.

In the third situation, if states are responsible via secondary liability, this in principle does not change the structure of the incentives to cooperate in comparison with situations where states act in concert but without an international organisation, since again it all depends on the criteria for attribution between states. Thus we can refer to those instances from a game theoretical perspective, to which we will now turn.

[106] Those are not yet up to a good rule of law standard; see Dannenbaum, 'Translating the Standard of Effective Control', n. 19, at 124 et seq.
[107] See *Behrami* and *Saramati*, n. 19 with accompanying citation.
[108] This is not to be confused with the situations extensively dealt with by the ARIO, under which circumstances a state is responsible on its own for the actions of the international organisation, in Articles 58 to 61 ARIO, n. 18: aid or assistance by a state; direction and control exercised by a state; coercion by a state; and circumvention of international obligations of a state member of an international organisation.
[109] For details of the case, see Hartwig, *Die Haftung der Mitgliedstaaten für Internationale Organisationen*, n. 93; M. Hartwig, 'The International Tin Council (ITC)', in R. Wolfrum (ed.), *Max Planck Encyclopedia of Public International Law (online)* (Oxford: OUP, 2011).

4. What games do states play?

We turn now to one important goal of state responsibility: its impact on the propensity of states to cooperate in the first place. One explanation given in the literature for the current state of state responsibility, where independent responsibility is dominant in practice, is the principle of sovereignty, defined in terms of independence and liberty from other states since 'states resist principles of responsibility that require them to be responsible for conduct other than their own'.[110] This argument can be reformulated from a game theoretical perspective: in which responsibility constellations will states cooperate to provide public goods? Game theory can help to explore and refine those explanations further, since it analyses strategic interaction[111] of different players – in our case, states (and non-state actors involved in the cooperation).[112] When states cooperate in solving common problems, they face trade-offs in their interests. Rephrasing this diagnosis in more abstract terms permits us to show where the problems in cooperation lie, and why and how institutional structures, including apportionment under Article 47 of the ARSIWA, can be designed to overcome those problems, since it highlights the underlying problem structure and motivations of the players. In game-theoretic terms, state responsibility changes the pay-off structure of states and therefore their willingness to cooperate. In different games, which result from different underlying problem structures, the pay-off structure changes in various ways and thus generates different incentives to cooperate, as will be explained below.

The most important issue is to define the content of the pay-offs: this can be either only the loss of the parties from non-cooperation, or it can also be the externalities caused by non-provision of the public good (such as the loss of a small island if China and the United States do not cooperate on climate change). It can also be an externality arising from the provision

[110] Nollkaemper and Jacobs, 'Shared Responsibility', n. 4, at 386.

[111] Interactive choices that cause agents' (peoples', firms', or nations') pay-offs to be interdependent are nominated as 'strategic'; that is, what one player will do depends on what he or she believes the other players will do. See Sandler, *Global Challenges. An Approach to Environmental, Political, and Economic Problems*, n. 2, at 25. More generally, for the application of game theory to law and international relations, see D.G. Baird, R. Gertner and R.C. Picker, *Game Theory and the Law* (Cambridge: Harvard University Press, 1994); J.D. Morrow, *Game Theory for Political Scientists* (Princeton: Princeton University Press, 1994).

[112] Game theory is not an end in itself, but merely a useful tool, and other theories might also contribute to explain states' behaviour. In particular, the trust game is not only used in economics and international relations scholarship, but also in sociology: see V. Buskens, *Between Hobbes' Leviathan and Smith's Invisible Hand* (The Hague: Eleven International Publishing, 2011), at 27. Furthermore, I use the rational choice assumption here as a first step; another interesting endeavour would be to use behavioural economics. See extensively (but not analysing state responsibility issues) A. van Aaken, 'Behavioral International Law and Economics' (2014) 55 Harv. ILJ (*forthcoming*).

of a public good (i.e. from cooperation). The classical case would be a peacekeeping mission that involves human rights violations of third parties.

The question is whether two or more states[113] will cooperate under different state responsibility systems. I will compare four such systems: no responsibility; proportional responsibility; independent responsibility; and JSL.[114] Two major constellations have to be distinguished. The first are constellations where actions are performed in isolation, but each action depends on what the others do. Treaties concerned with controlling pollution, climate change, or overfishing are examples, such as exceeding fishing quotas leading to overfishing or not reducing emissions as requested by the Kyoto Protocol.[115] This is a case of cumulative action. Here, states face a prisoners' dilemma (PD) game where their cumulative actions lead either to a good result, in the case of adherence to the law or, in the case of violation, to a negative outcome (section 4.1).

The second are constellations where states can voluntarily come together in a concerted action to provide a public good (for example, a peacekeeping mission) but may face responsibility for violations which occur during the mission. Cooperation is understood as a joint undertaking. The harm occurs while both states work on this joint undertaking. Here, states pursue joint positive goals and need to cooperate in order to achieve a cooperative surplus; a violation is but an (usually) unintended side-effect of the cooperative provision of the public good. States play a trust game in this case.[116] They can also use an international organisation for the task, whereby the international organisation is either solely responsible, or may reclaim either *pro rata* from all members (if contributions vary according to ability to pay: the deep pocket approach) or proportionally (such as from those states that contributed most to the harm), or by JSL (section 4.2). Section 4.3 summarises the findings.

[113] The game theoretical model will show only two states, but the rationale remains the same even if more players are involved.
[114] One could also compare responsibility rules with fault (negligence or intent), but since fault does not play a role under the rules of ARSIWA, this will be left out here.
[115] Kyoto Protocol to the United Nations Framework Convention on Climate Change, Kyoto, 11 December 1997, in force 16 February 2005, 2303 UNTS 148 (Kyoto Protocol).
[116] Treaties can manage trust relationships, but how exactly they do so varies with the type of transaction: see Buskens, *Between Hobbes' Leviathan and Smith's Invisible Hand*, n. 112, at 27 et seq. Possibilities are e.g. guarantees and 'hostages'.

4.1 Prisoners' dilemma constellations

A PD has an incentive structure which – without additional mechanisms – makes cooperation of states unlikely in the first place (without considering state responsibility).[117] If every player acts rationally individually, the collective outcome is sub-optimal. The game applies to any number of participants that seek a collective response to a problem in which the gain from reneging on one's commitment can give a defector a short-term advantage over cooperation.[118] In the following, the situations of a PD without responsibility (section 4.1.1), with independent responsibility (section 4.1.2), with proportional responsibility (section 4.1.3), and with JSL (section 4.1.4) will be discussed.

4.1.1 No responsibility

The pay-offs here depict only the gains from (non-)cooperation – the harm to third parties does not enter the pay-offs. This game is known from the so-called 'arms race' and is prevalent in many other constellations of cumulative action. How does the game look in a world where no state responsibility exists (or there is no injured party claiming)?[119]

Table 1: Simple Prisoner's Dilemma

	State II		
		Defection	Cooperation
State I	Defection	2,2[120]	4,1
	Cooperation	1,4	3,3

Although cooperation has a higher pay-off for both states, both of them will defect, no matter what the other state does (the pay-off of 4 of defection is higher than the pay-off of 3 for cooperation). The dominant strategy for each state is defection; there is a unique equilibrium

[117] See e.g. J.L. Goldsmith and E.A. Posner, *The Limits of International Law* (Oxford: OUP, 2005).
[118] For a game with many participants, see Sandler, *Global Challenges. An Approach to Environmental, Political, and Economic Problems*, n. 2, at 31.
[119] The first number is the pay-off of State I, the second number the pay-off of State II. The underlined numbers represent a Nash equilibrium. For reasons of simplicity, probabilities are not explicitly modelled: the pay-off is the expected pay-off.
[120] The underlining denotes an equilibrium.

– defection, defection – and therefore, states will not cooperate (in a one-shot game). They end up in the cell with a pay-off of 2 for both (Nash equilibrium),[121] although they could have achieved a pay-off of 3 for both, if cooperating. In the PD the equilibrium is thus non-cooperative, with pay-offs (2,2). There are many mechanisms that can solve this social dilemma: once a game is repeated (open-ended), the pay-off matrix may change, since the pay-off of defection declines and the pay-off of cooperation rises due to reputational effects. All this has been widely researched in international law and international relations.[122] What is the problem with failing to ensure that there is cooperation? From the perspective of the parties, the problem is that each of them loses 1 (3-2=1), and thus the total loss of the parties is 2, i.e. only the loss of non-cooperation – harm to third parties is not included.

4.1.2 Independent responsibility

How do the incentives change once responsibility exists and externalities to third parties are taken into account? The role of state responsibility (and the different rules of apportionment) has not been investigated, although sanctioning has been proposed as a mechanism to overcome the social dilemma.[123] There is an additional social loss that the parties do not take into account if there is no responsibility (for instance, a loss for other victims of pollution). But this is relevant if state responsibility exists. Typically, the amount to be paid is somewhat related to the loss. We are interested in the amount of compensation (denoted X).[124] Note that the higher is X, or the expected compensation E(X),[125] the smaller is the pay-off from cooperation for the states. Every payment of compensation thus diminishes the expected pay-

[121] A Nash equilibrium is a solution concept of a non-cooperative game involving two or more players, in which each player is assumed to know the equilibrium strategies of the other players, and no player has anything to gain by changing only their own strategy.
[122] Goldsmith and Posner, *The Limits of International Law*, n. 117; A. Guzman, *How International Law Works: A Rational Choice Theory* (Oxford: OUP, 2008); Posner and Sykes, *Economic Foundations of International Law*, n. 3.
[123] See Sandler, *Global Challenges. An Approach to Environmental, Political, and Economic Problems*, n. 2, at 32.
[124] $X > 2$ if the punishment is larger than the actual damages. But we could also have $X < 2$, if for some reason there is under-compensation. This is, in turn, crucial because the equilibrium under the various rules depends on X, but for reasons of simplicity we assume that X is the exact amount of damage done to third parties.
[125] E(X) = expected compensation (i.e., the probability of having to pay the whole claim * X). E denotes that we deal with expected compensation, which is subjective (whereas X only is objective). For simplicity, all states have the same subjective probability of being held responsible in case of independent responsibility: they do not know whether they or another state will be held responsible. Note that this is different for proportional responsibility where a half/half split is assumed for simplicity, and thus E is not needed (X is objective). This might not hold in practice since, for example, states with deep pockets are more likely to be sued. In this case, expected damages might surpass the contribution to the damage, and from the perspective of that state, the game turns into a trust game.

off of states. Let us now turn to independent responsibility, where a state can be held responsible for the whole harm to third parties independent of its contribution.

Table 2: Prisoner's Dilemma with Independent Responsibility

	State II		
		Defection	Cooperation
State I	Defection	2-E(X),2-E(X)	4-E(X),1-E(X)
	Cooperation	1-E(X),4-E(X)	3,3

The dominant strategy is defection if E(X)<1 (small expected damages); the game then shows a unique equilibrium – defection, defection. Therefore, states will never cooperate if they face the risk of being held responsible for the whole harm, even if they did not cause it.

But if E(X)>1, where there is a high expected compensation,[126] then the game becomes a trust game (it has two equilibria). This is counterintuitive and may be explained by the fact that the stakes are so high (i.e. state responsibility as a sanctioning device) that it is better to cooperate. There are thus two equilibria, depending on the expected responsibility to third parties. This can easily be seen because responsibility reduces the pay-off uniformly in all cases except the case of cooperate/cooperate. Therefore, it does not change the decision of, say, state I under the assumption that state II defects: state I's pay-off when it cooperates, and state I's pay-off when it defects, go down by the same amount. So defection remains a best response to defection by the other party. But if state II cooperates, than the rule makes the pay-off of state I with cooperation higher than its pay-off with defection. Therefore, cooperation is now state I's best response to state II's decision to cooperate. So cooperate, cooperate is also an equilibrium.

To summarise: if the expected damages are small, defection remains the dominant strategy. If the expected damages are large, the game turns into a trust game with two equilibria: that is, the behaviour of states is indeterminate. Higher expected sanctions thus augment the propensity to cooperate.

[126] For example, because the damage caused is very great or there are more third parties suing. Note that also here, over- and under-compensation is possible, for cooperation depends on the *ex ante* belief of states.

4.1.3 Proportional responsibility

The game changes in the case of proportional apportionment:[127]

Table 3: Prisoner's Dilemma with Proportional Responsibility

	State II		
		Defection	Cooperation
State I	Defection	2-X/2,2-X/2	4-X,1
	Cooperation	1,4-X	3,3

Where there is proportional apportionment, the dominant strategy is cooperation if, and only if, X>2.[128] There is thus a unique equilibrium – cooperation, cooperation (3,3). Therefore states will always cooperate. Note, though, that this holds only if the expected reparation is higher than the gains from defection. In this case, proportional responsibility is always better than independent responsibility, since states will always cooperate (because there is only one equilibrium). We can expect X to be very high (larger than 2) in, for example, climate change constellations. But if 1<X<2, then the game becomes a trust game with two equilibria – defection, defection, and cooperation, cooperation – and equals, from the cooperation viewpoint, independent responsibility with large damages.

To summarise: if the expected damages are high, states will always cooperate under proportional responsibility, whereas this is not assured under independent responsibility. If the expected damages are very small (X<1), they will defect, since then we are close to the pay-offs of the game without responsibility. If expected damages are in the middle range (1<X<2), the game is indeterminate, since there are two equilibria and it turns into a trust game. All then depends on the expected behaviour of other states.

[127] Note that for reasons of simplicity, responsibility is shared in a perfect way in this matrix: that is, half/half, assuming that states can be attributed exactly half of the damage (this, in turn, of course depends on the attribution criterion). If states are asymmetric with respect to their pay-offs, this may complicate matters.

[128] This follows from: 1 > 2-X/2, which implies X>2; and 3 > 4-X, which implies X>1. X/2 denotes that the assumption is a half/half split. This assumption is taken for reasons of simplicity and denotes thus an objective probability (this is why there is no E (X), which denotes subjective probabilities). This assumption of a half/half split is without loss of generality. If the share is not half/half, then the threshold (in our case 2) shifts accordingly.

4.1.4 Joint and several responsibility

What happens with JSL? JSL lies in the middle of the two extremes.[129] Whether it is closer to independent responsibility or to proportional apportionment depends on the probability of recovering the 'overpaid' share from the other states. Depending on the indemnity rule between the states, JSL is closer to independent or proportional responsibility. If that rule is zero (or is *de facto* zero), it is similar to independent responsibility; if the rule is 100 per cent, it equals proportional apportionment. The latter case is unlikely, however, since we can expect recovery to involve costs, whether diplomatic costs or costs of dispute settlement and enforcement. Thus JSL is never as good as proportional responsibility from a cooperation perspective (although not under the compensation perspective).

4.2 Trust game constellations

Let us turn to cooperative ventures of states where they come together for concerted action. At the forefront of international cooperation is trust: 'the nature of many risks requires cooperation, coordination, and trust between a range of stakeholders who have diverging interests and different perceptions of the (potential) risks involved.'[130] We define risk here as the risk, first, of being held responsible that the cooperative outcome is not achieved; and second, of being attributed the wrong caused by other players in the game. I submit that international cooperation in common tasks is best illustrated by a trust game.[131] While in a PD there is a conflict between individual rationality and mutual benefit, in a trust game, what is rational for one player to do depends on his or her beliefs about what the other will choose.[132] The game describes a conflict between the risk of responsibility for actions the state did not cause (or omissions it did not commit), on the one hand, and the desire for social gains by cooperation, on the other. The stag hunt game models the underlying problem structure of the strategic interests of the players: rational agents are pulled in one direction by considerations of risk of responsibility, and in another by considerations of mutual benefit expected from

[129] Again, for reasons of simplicity, it is assumed that that E(X) is the same for all parties: that is, the damages are split half/half. Surely, if one country is more solvent, that country will be targeted first. Other considerations might make the probabilities different: media damage, internal politics, ability to fight back, fear of retaliation, etc. If the chances to recover from other countries is zero, this will shift JSL close to independent responsibility: that is, if a party bears the full X and the other bears nothing, then that party will always choose to defect.
[130] M.B.A. v. Asselt and O. Renn, 'Risk Governance' (2011) 14 JRR 431, at 435.
[131] Other names for it, or its variants, include 'assurance game', 'coordination game', and 'trust dilemma', and its applicability immediately becomes clear for international cooperation.
[132] B. Skyrms, *The Stag Hunt and the Evolution of Social Structure* (Cambridge: CUP, 2004), at 3.

cooperation.[133] The game was first described by Jean-Jacques Rousseau. Two individuals go out hunting and each hunter can choose to hunt either a stag (deer) or a hare, the hare being worth less than the stag. Neither knows what the other hunter will do. If they both concentrate on hunting the stag, they will gain a bigger price, but they need the cooperation of the other. If each hunter assumes that the other hunter may not cooperate, they will choose to shoot the hare in order to ensure having meat on the dinner table.[134] It all depends what one player thinks the other player will do. Trust is often not present, which hinders cooperation in the first place: this is the so-called 'social dilemma'. In this case, states will prefer to play a lone hand, although they would gain from cooperation and/or delegation to an international organisation.

Rational players can coordinate on the stag hunt (not choosing the hare hunt), which gives them a better pay-off, but they need a measure of trust to do so. Several dynamics can lead to a Nash equilibrium in which the players hunt the stag (and are thus better off). Most of the trust dynamics tested in experiments are independent of institutions.[135] But trust problems can be solved by many means, such as by having a central government (reliable enforcement), by creating network structures (as in e-bay sellers' ratings), long-term relationships,[136] and a reputation for being trustworthy.[137] As Lenin stated long ago, 'trust is good but control is better'. In game-theoretic terms, the term 'control mechanisms' refers to the possibility of punishing or rewarding a partner in subsequent transactions in repeated trust problems.[138] Thus we also find institutional structures that punish defection:[139] state responsibility as a sanctioning device is one of them.

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[133] For details of the stag hunt game see ibid., at 5-9. He holds that a stag hunt describes much more aptly most of those situations where political scientists used to assume a PD. Indeed, in certain situations with repeated interactions, the PD turns into a stag hunt game. While Hobbes, reframed in game theoretical terms, would assume a PD, the stag hunt would be the appropriate game to describe a social contract (ibid., at xii). If international law creates a minimal social contract in international relations, assuming a stag hunt in situations of cooperative efforts of states should be the correct game.

[134] The game was first described by Jean-Jacques Rousseau, and is deemed to be almost as important a game as the more renowned PD game in international relations.

[135] On trust as a social mechanism, see E. Fehr, 'On the Economics and Biology of Trust' (2009) 7 JEEA 235. Individual beliefs can be changed by communication and social norms. This is more likely in small communities which know each other well.

[136] Buskens, *Between Hobbes' Leviathan and Smith's Invisible Hand*, n. 112, at 17 et seq.

[137] On reputational mechanisms in international law, see for an overview Brewster, 'Reputation in International Relations and International Law', n. 27.

[138] Buskens, *Between Hobbes' Leviathan and Smith's Invisible Hand*, n. 112, at 23.

[139] Skyrms, *The Stag Hunt and the Evolution of Social Structure*, n. 132, at 9, et seq. and Buskens, *Between Hobbes' Leviathan and Smith's Invisible Hand*, n. 112, at 24. Another mechanism to overcome trust problems is the 'learning mechanism'. Institutional learning mechanisms are able to generate trust by monitoring or peer-review. The difference between the control mechanism and the learning mechanism is that control is based on

In the following, the situations of a trust game without responsibility (section 4.2.1), with independent responsibility (4.2.2), with proportional responsibility (4.2.3), and with JSL (4.2.4) will be discussed.

4.2.1 No responsibility

Let us look at the structure of the game situation without any responsibility.

Table 4: Trust Game Without Responsibility

State I	State II		
		Defection (hare)	Cooperation (stag)
	Defection (hare)	1,1	1,0
	Cooperation (stag)	0,1	3,3

If one player thinks that the other one will not cooperate, he or she is better off when playing alone (hunting the hare: pay-off of 1, because he or she would end up with nothing (0) if they did not do so). They would end up hunting the hare (pay-off of 1,1). Only if they believe that the other player will also concentrate on hunting the stag will they do so and catch the stag (3,3). Two equilibria exist in this game, and which one is chosen depends on trust; it therefore depends on what one player thinks the other player will do.

4.2.2 Independent responsibility

Let us look first at independent responsibility, which carries the risk of being held responsible for harm to third parties caused by other states.

Table 5: Trust Game with Independent Responsibility

State I	State II		
		Defection (hare)	Cooperation (stag)
	Defection (hare)	1-E(X),1-E(X)	1- E(X),0-E(X)

the anticipation of behaviour of the players in the future, while learning is based on information obtained from the players in the past.

	Cooperation (stag)	0-E(X),1-E(X)	3,3

Under this condition there is no dominant strategy. There are two equilibria in pure strategies – defection, defection; and cooperation, cooperation.[140] Which one is chosen depends on trust, as in the situation without state responsibility. Therefore, it depends on what a state thinks the other state will do – here, trust-creating mechanisms, apart from state responsibility, come into play. With independent responsibility, the trust game always remains a trust game (two equilibria), irrespective of the expected damages. Note the difference with the PD situation, where under independent responsibility the game turns into a trust game only if E(X)>1; otherwise defection is the dominant strategy.

4.2.3 Proportional responsibility

Let us look at proportional apportionment, where I again assume a half/half splitting of responsibility without loss of generality.

Table 6: Trust Game with Proportional Responsibility

State I	State II		
		Defection (hare)	Cooperation (stag)
	Defection (hare)	1-X/2,1-X/2	1-X,0
	Cooperation (stag)	0,1-X	3,3

The dominant strategy is cooperation if, and only if, X>2.[141] We then have a unique equilibrium – cooperation, cooperation (3,3). With proportional apportionment, states will thus always cooperate, even in the absence of trust. If X<2, the game remains a trust game with two equilibria; again, trust is crucial for cooperation. Note that if damages are high, there is no difference between a PD and a trust game under proportional responsibility: both lead to cooperation as a unique equilibrium.

[140] This is because 1-E(X) is always > than 0- E (X), and 1-E(X) is always < 3. Thus it does not matter how high the expected damages are; the structure of the pay-offs remain unchanged.
[141] X again denotes compensation to third parties. This follows from: 0 > 1-X/2, which implies X>2; and 3 > 1-X, which implies X>-2.

4.2.4 Joint and several responsibility

For JSL, the same reasoning applies as in the PD: it depends on the probability of recovery as to whether the JSL situation resembles the proportional or the independent apportionment.

4.3 Summary of the findings on cooperation of states

Assuming that cooperation is desirable, there is thus a clear ranking of outcomes. The first best is cooperation/cooperation; the second best is indeterminate with two equilibria depending on trust; and the third best is defection/defection. In a world without responsibility, in cases of cumulative action, states will not cooperate, whereas in cases of concerted action it depends on their mutual trust. We can now distinguish between two situations: one with high damages and one with low damages.

In PD situations – that is, situations of cumulative action – we can show a clear ranking: independent responsibility will lead to non-cooperation if the harm is not too high. In contrast, if the harm is very high and the state risks being held responsible for the whole damage, it is unclear whether states will cooperate. This is counterintuitive and can be explained by the effect of punitive damages. Then the costs of non-cooperation can become higher than the costs of potential responsibility, and the game changes into a trust game. In the case of proportional liability, states will always cooperate if damages are high, and thus it is better for cooperation than independent responsibility. Where damages are intermediate, the game changes into a trust game with two equilibria. Only if damages are very small will states defect, and the situation will be the same as if there were no responsibility. JSL may thus work either way: if damages are high and/or recovery from other states is likely, then cooperation is more likely, since the structure is similar to proportional responsibility with high E(X). If damages are low and/or the probability of recovery is low, cooperation is not secured, since the structure is more similar to independent responsibility. All thus depends on recovery from the other states, and it can cut both ways: in the direction of either independent responsibility (no recovery) or proportional responsibility (perfect recovery).

Let us turn to instances of concerted action; that is, a trust game. Having ‘no state responsibility’ or having ‘independent responsibility’ changes nothing in terms of cooperation (it all depends on trust), but ‘proportional responsibility’ surely leads to cooperation.

Assuming that the third party victim is always compensated, then 'proportional' responsibility strictly dominates 'independent' responsibility – that is also intuitively convincing in the case of high damages. If the likelihood of the third party victim being compensated changes to zero (e.g. because there is immunity), this amounts to a system without state responsibility, and cooperation depends on trust. In concerted action constellations, contrary to a PD, other trust-generating mechanisms can be used to solve the cooperation problem, independently from state responsibility.

Table 7: Summary of Consequences of Responsibility Regimes for Cooperation

Cumulative Action (PD) **Concerted Action (TG)**	**High damages**	**Intermediate damages**	**Low damages**
No responsibility	PD: Non-cooperation TG: Indeterminate	PD: Non-cooperation TG: Indeterminate	PD: Non-cooperation TG: Indeterminate
Independent responsibility	PD: indeterminate TG: Indeterminate	--- TG: Indeterminate	PD: Non-cooperation TG: Indeterminate
Proportional responsibility	PD: cooperation TG: cooperation	Indeterminate ---	PD: Non-cooperation TG: Indeterminate

The game theoretical analysis could show that it may impact the propensity of states to play the game in the first place if responsibilities are assigned in a way that a player is subject to responsibility above and beyond the harm caused by that violator's unlawful conduct. That is, independent responsibility, especially in low damages situations, is worse than proportional responsibility. A perfect JSL situation with full recovery sets the same incentives for cooperation as proportional responsibility. Apart from sovereignty concerns, incentive problems may thus militate against norms on state responsibility, which would hold all states either independently responsible for the whole, or jointly and severally liable (with less than full recovery) for the risk that third parties are hurt (as in peacekeeping missions). In trust

games, if trust in the other actors is not secured, states may prefer to play a lone hand, although they would gain from cooperation. This reverses with proportional apportionment in combination with high amounts of damages: interpreting Article 47 of the ARSIWA in that way would better secure cooperation of states, even in a PD situation. This implies that in spite of considerations of fairness and compensation of victims, one needs to be cautious as to how state responsibility should be designed.

5. The trade-off problem from a political economy perspective

We can now judge the current state of state responsibility. The first criticism is that not one size fits all – as we have seen, it is necessary to distinguish different constellations in the primary law (which deals with different problem structures).[142] Clearly, the first best option is to be able to draw on *ex ante* arrangements that states would need to agree before acting together as to how to distribute responsibility *ex post.*[143] Surely the ARSIWA and the ARIO give some guidance, but they also leave space for filling those gaps in cases of shared responsibility; thus a tribunal should have some guidance as to how to apply Article 47 of the ARSIWA.[144] The following analysis is intended to provide such guidance, showing the trade-offs of the goals (section 5) when determining responsibility. First, the trade-off problems will be described (section 5.1); second, potential solutions will be shown (section 5.2).

5.1 Trade-off between the different goals of state responsibility

As set out in section 2, three main goals of the law of international responsibility can be formulated: first, to compensate the injured parties; second, to deter states from engaging in harmful actions in the future (and therefore preserve peace); and third, to secure international cooperation. Those goals cannot easily be achieved simultaneously. Let us look at the

[142] In the same vein, Nollkaemper and Jacobs, 'Shared Responsibility', n. 4, at 398 et seq., section: 'Moving Away from the Unity of the Law of International Responsibilty'.
[143] Cf. ibid., at393: '[a]fter all, whether or not two states are jointly responsible for a particular act is first and foremost governed by what states have actually agreed to, whether in drafting their primary obligations or in providing for specific secondary rules of responsibility. If states and other actors wish to prevent the above-noted problems of too much or too little responsibility, they simply should agree on the modalities of sharing ex ante.'
[144] Ibid., at 407. For discussion of the danger that the ARSIWA might restrict judges unduly and are unable to cope with the development of international law, see D. Caron, 'The ILC Articles on State Responsibility: The Paradoxical Relationship Between Form and Authority' (2002) 96 AJIL 857.

apportionment principles in detail, this time from a compensation perspective, taking into account the participation constraint of states.

From a compensatory perspective, there are good grounds for finding JSL; it is the first best option from the perspective of the injured party.[145] Under JSL, a litigant can claim against one defendant only and recover the whole reparation from that one defendant, regardless of how many other defendants are also responsible for the damage. It is sufficient for the claimant to identify one or more parties that are responsible for the same loss. That defendant might then – with a limited probability – recover from other defendants *ex post* but it has to bear *ex ante* a disproportionally large share of the burden. JSL can (but need not) provide an indirect path to proportional liability, provided all defendants are available and able to pay.[146] The risk of recovery is shifted to the defendant states, away from the injured parties.[147] One joint tortfeasor then serves as an 'insurer' of another.[148]

States can be hold jointly and severally liable only if their concurrent acts brought about the harm to the injured party. The acts of the defendants do not have to be simultaneous: they must simply contribute to the same event. For example, assume that one state diverts a river and another one later pollutes it. Together this leads to a disruption of water supply for a third state. JSL is applicable in both instances of cumulative and concerted action. The classic reason the law imposes joint liability is when the harm is 'indivisible', in order to deter wrongdoing by those acting together.[149] JSL thus shifts the risks of recovery and the burden of proof of attribution to the defending states (away from victims). Although that fosters the first goal (reparation), it impacts upon the third (cooperation). This was clearly stated in the submissions of governments in the *Behrami* and *Saramati* case.[150] On the one hand, it gives

[145] 'When two or more persons by their acts are possibly the sole cause of a harm (…) and the plaintiff has introduced evidence that the one of the two persons (…) is culpable, then the defendant has the burden of proving that the other person (…) was the sole cause of the harm. The real reason for the rule that each joint tortfeasor is responsible for the whole damage is the practical unfairness of denying the injured person redress simply because he cannot prove how much damage each did, when it is certain that between them they did all.' *Summers v. Tice*, 33 Cal. 2d 80 (1948), at 85, quoted from *Oil Platforms*, n. 52, at 354 et seq., para. 67 (Judge Simma, Separate Opinion). See also extensively Dannenbaum, 'Translating the Standard of Effective Control', n. 19, at 170, who proposes JSL since it is the best solution from a victim's perspective.

[146] New Zealand Law Commission, 'Review of joint and several liability', Issue Paper 32 (2012), available at http://ip32.publications.lawcom.govt.nz/uploads/NZLC-IP32-Review-of-Joint-and-Several-Liability.pdf, at 4 (last accessed 5 June 2014).

[147] L.A. Kornhauser, 'Economic Analysis of Joint and Several Liability', in J. Arlen (ed.), *Research Handbook on the Economics of Torts* (Cheltenham: Edward Elgar, 2013), at199.

[148] Ibid., as well as *Eurotunnel*, n. 82, para. 177: '[i]n other words someone who is jointly and severally liable takes the risk of a partner's insolvency, disappearance or non-amenability to suit.'

[149] Kornhauser, 'Economic Analysis of Joint and Several Liability', n. 147.

[150] See *Behrami and Saramati*, n. 19.

states an incentive to monitor each other, since they might be held responsible for each other; on the other hand, it might promote shirking by states in case they expect not to be responsible for the full costs of their behaviour. Depending on the recovery probability and the ability to monitor, it may thus inhibit cooperation. In cases of concerted action (a trust game), control mechanisms are much easier to institutionalise than in instances of cumulative action (a PD situation) and, thus, cooperation is more likely in the former constellations, even under JSL. Also in cases where trust is present, JSL might mitigate the participation constraint problem depending on the recovery possibilities. JSL is therefore a second best option (in comparison with proportional responsibility) from an incentive point of view of states, but a first best option from the victims' perspective.

Independent responsibility is clearly, from a state's perspective, the worst outcome, and would inhibit the propensity of cooperation in the first place, since the pay-off of cooperation would be potentially diminished to a great extent (although more so in PD than in trust games). From a victim's perspective, independent responsibility is a second best outcome after JSL, since it just needs to identify one violator and can pick the one which, first, is accessible in courts, and second, has deep pockets.

Under proportional responsibility, the plaintiff has to identify all the defendants and claim a proportionate share from each of them. It requires the plaintiff to claim and prove a percentage or share of their loss from each defendant, who may of course contest both the attribution to them and the appropriate share. This is difficult and sometimes impossible for plaintiffs. Under proportional liability the share allocated to an insolvent or absent defendant cannot be recovered by the plaintiff unless there is a further rule to re-allocate uncollectable shares. What is important here is that under proportional responsibility, the risk of who should bear the cost of the loss, and also who bears the risk of a defendant not paying, is shifted to the claimant, thus impacting upon the first goal of compensation, but it secures cooperation of states much better, as has been shown above.

To summarise: whenever possible, from a compensatory perspective, JSL is best; independent responsibility is second best; and proportional responsibility is the worst. In contrast, from a cooperation point of view, responsibility should be attributed to the state directly and proportionally. Furthermore, only when actors take responsibility for their actions will incentives in the institutional setting be such that harm will be avoided (the second goal of deterrence). Acting without consequences does not usually get the incentives right: neither for

the level of activities, nor for the scope of negligence or willful acts (although the latter considerations are immaterial in the ARSIWA).[151] Furthermore, only if the other actors trust their cooperative partners to abide by the law will they cooperate. Moreover, states will not easily assume independent responsibility for their joint actions, since they would otherwise run the risk of being held responsible (solely for the whole violation, or jointly and severally) for something they did not do or could not control.

5.2 Institutional suggestions

If criteria of attribution are not clarified *ex ante*, states might be reluctant to delegate the decision concerning them to international tribunals. Only if they are clarified can individual responsibility be attributed in proportion of attribution. Even if the criterion is clear, observability and verifiability of the behaviour is often difficult. The best option here would be to extend monitoring and compliance mechanisms. Clear assignment of responsibilities is not only a prerequisite of the rule of law for those harmed by the activities, but also a prerequisite of trust, which in turn is crucial for cooperation. If players do not have clear responsibilities, shirking is a lot easier, and its detection and verification is much harder. This is not to say that that trust-generating mechanisms are non-existent in the current treaties. They are there, but they should be emphasised even more. Only by those means can murky responsibilities, where causality is not easily observable or verifiable, be clarified, thus enabling individual responsibility to be proportional to the contribution of the harm (whatever the criterion for attribution is), fostering cooperation (even in PD games) and helping claimants to identify tortfeasors.

What happens in cases where apportionment is simply impossible? As was asked by Judge Simma in the *Oil Platforms* case, 'can neither of the (…) States be held responsible because it is impossible to determine precisely who did what?'[152] On the one hand, he recognised the difficulty with making a finding of responsibility where apportionment is impossible. On the other hand, he excluded as unfair a solution in which no one would be held responsible (impacting upon the first goal of compensation). This is especially important in situations of cumulative actions, since each contribution is often non-observable (e.g. in climate change).

[151] L.A. Kornhauser and R.L. Revesz, 'Joint Tortfeasors', in M. Faure (ed.), *Encyclopedia of Law and Economics*, 2nd ed. (Cheltenham: Edward Elgar, 2009), 625.
[152] *Oil Platforms*, n. 52, at 354, para. 65 (Judge Simma, Separate Opinion).

This calls for using proxies in order to be able to determine proportional responsibility, for example the share of CO_2 emissions. Another solution is to shift the burden of proof[153] of attribution from the victim to the joint tortfeasors or to the international organisation under which umbrella they acted. But states will not easily consent to treaties or joint actions if they risk bearing responsibility for actions of other states. I will outline instances where states are more likely to agree to JSL, since it is best from a compensatory perspective, and some institutional suggestions for dealing with shared responsibilities in international law.

Let us turn to the case of cumulative but independent action of states (the PD situation). Although states might have agreed through a treaty to achieve a common goal (like sustaining fisheries),[154] each state acts independently and has less control over the others' actions. Each state has to rely on compliance mechanisms to trust that other states will contribute to the public good. When the injured party is able to claim against one state only for the whole damage, that might have consequences for the consent to collective action in situations of 'cumulative action' in the first place.[155] It is in those situations where non-compliance mechanisms are not necessarily considered to be a matter of state responsibility (thus de-connecting potential reparations from a violation of an international norm; the public law dimension). Although this might be deplored,[156] it is explicable by states avoiding taking on responsibility where attribution might be unclear, and thus individual action is burdened with the risk of being attributed responsibility without action of the respective defendant state.[157] One needs to note, however, that deterrence is most likely in instances where reparations loom – in all other cases, only reputational sanctions are present. State responsibility is thus a crucial solution to the cooperation problem, as could be shown by game theory. If reputational sanctions are considered an equivalent to 'small damages', this might lead to a breakdown of cooperation in those instances.

Let us turn to instances of concerted action (the trust game situation). Here, consent to a joint undertaking for providing a public good is common (e.g. peacekeeping). This makes mechanisms for creating trust easier than in situations of cumulative actions. It is therefore more likely that states will agree to JSL. Nevertheless, it has some downsides from the

[153] Ibid., at 355, para. 68.
[154] There are, of course, instances where states act completely independently from each other, as in the *Oil Platform* case.
[155] See in the same vein Nollkaemper and Jacobs, 'Shared Responsibility', n. 4, at 369.
[156] Ibid., at 407, attribute it to a more public law approach to those issues, in that compliance procedures are primarily concerned with securing public power, to limit abuses of power, and to further the rule of law.
[157] Ibid.

perspective of the cooperating states. The incentives for victims to go for the 'easiest' state are huge: criteria for choosing the state might be its 'deep pockets', consent to mandatory jurisdiction of the ICJ, or the reputational sensibility of that state. There is thus a risk that the state will find itself in a *de facto* situation of independent responsibility, especially if recourse is unlikely.

The question is, under what circumstances would states agree to JSL, given that this rule best serves the victims' desire for compensation? I submit that they would do so if several circumstances are met; the range is to be found on a continuum. First, it is explicable that JSL is consented to in lawful activities (as in the Liability Convention). States thereby know beforehand that they are consenting to very risky but desirable activities in which each country involved has an interest in participating in the common enterprise; the expected benefit from the joint activity is often greater than the risk of being held liable for the actions of another state. Second, in instances of strict liability for states (usually liability for lawful behaviour), it is more likely that they will also consent to JSL, since the potential negligent behaviour of other states, which is usually very difficult to detect and verify, does not play a role.[158] Third, the smaller the project (in scope, time, and potential damages), the more likely it is that states will consent to JSL, since the behaviour of other cooperating states can be better monitored and controlled. Also, trusting on the basis of a small sum is easier than trusting on the basis of a potentially undefined large sum for reparations. Fourth, the cooperation needs to be well-defined in scope. The clearer the definition of the common task, and the more controllable it is, the higher the likelihood that there will be consent to JSL. This is what we see, for example, in the Liability Convention, since launching a space object is an activity that is well-defined in scope. Fifth, the closer the cooperative relationship is between the states, the higher the degree of trust and the greater the likelihood they will agree to JSL. This is, for example, the case in the LOSC. The JSL foreseen in Article 6 to Annex IX of the LOSC was written with the EU in mind. The EU can be presumed to be an international organisation with a considerable amount of trust between its members, compared to other international organisations.

It is also possible to introduce caps on responsibility if states cooperate through a treaty (or a soft-law agreement, as in peacekeeping). This could be combined with an 'insurance mechanism' through an international organisation, and would change pay-offs accordingly.

[158] Kornhauser and Revesz, 'Joint Tortfeasors', n. 151.

Another possibility is to create funds *ex ante* to compensate victims or to create insurance solutions, as is already done in the International Convention on Civil Liability for Oil Pollution Damage, which provides for mandatory insurance for tanker owners.[159]

If states act under the auspices of an international organisation (as in peacekeeping missions), the responsibility should be shifted to the international organisation; JSL is more problematic due to the participation constraint of states.[160] It can be assumed that delegating the monitoring and control task to a third actor (the international organisation) will mitigate the trust problems between the participating actors. The international organisation usually has the best information on the attribution problems and is also the cheapest insurer; it might also have the best control over participating states.[161] It can recoup the reparations from the states that were ultimately responsible (proportional individual responsibility), as well as decide on other means of sharing the burden (e.g. *pro rata*). The problem of immunity of international organisations is, of course, known, and the *Behrami* and *Saramati* case for example was read very critically, since the responsibility of the states participating in the Kosovo Mission was denied by the ECtHR – and the UN is immune. The critique is understandably result-driven, in view of the first goal of just compensation. But the problem of immunity, however present and likely to have an impact, should not hinder an undistorted analysis of state responsibility for conceptual reasons. *Behrami* and *Saramati* can thus be read differently. It accounts for the ever-growing importance of international organisations in international law and international relations, and attributes responsibility to the international organisation. It may be read as a call to the international organisations to bundle responsibility within them. If immunity of

[159] International Convention on Civil Liability for Oil Pollution Damage, New York, 29 November 1969, in force 19 June 1975, 973 UNTS 3. The Civil Liability Convention was adopted to ensure that adequate compensation is available to persons who suffer oil pollution damage resulting from maritime casualties involving oil-carrying ships. The Convention places the liability for such damage on the owner of the ship from which the polluting oil escaped or was discharged. Subject to some specific exceptions, the liability is strict; it is the duty of the owner to prove in each case that any of the exceptions should in fact operate. However, except where the owner has been guilty of actual fault, they may limit liability in respect of any one incident. The Convention also requires ships covered by it to maintain insurance or other financial security in sums equivalent to the owner's total liability for one incident.

[160] See *Behrami and Saramati*, n. 19, para. 149: '[i]n the present case, Chapter VII allowed the UNSC to adopt coercive measures in reaction to an identified conflict considered to threaten peace, namely UNSC Resolution 1244 establishing UNMIK and KFOR. Since operations established by UNSC Resolutions under Chapter VII of the UN Charter are fundamental to the mission of the UN to secure international peace and security and since they rely for their effectiveness on support from member states, the Convention cannot be interpreted in a manner which would subject the acts and omissions of Contracting Parties which are covered by UNSC Resolutions and occur prior to or in the course of such missions, to the scrutiny of the Court. To do so would be to interfere with the fulfilment of the UN's key mission in this field including, as argued by certain parties, with the effective conduct of its operations.'

[161] See for a refined analysis on different situations in peacekeeping, especially the control criterion, Dannenbaum, 'Translating the Standard of Effective Control', n. 19.

international organisations is to prevail in courts, then at least it is a call to continue developing claims commissions that can handle the victims' cases. How those can and should be designed to fulfil the criteria of the rule of law and access to justice must be left open here.

In short, a really centralised coordinator, such as an international organisation, is rare in international law, but it may not only solve the trust problem but also the responsibility problem, because then the international organisation could be held responsible for insufficiently fulfilling its tasks. Also, the international organisation could be held responsible if it used private operators, even if internally; it could recoup damages it paid to third parties, based on contracts. The question, then, is what mechanisms can be created, first, to enhance trust even more, and second, to create clear responsibilities internally, but this must be left to further research.

6. Outlook

Global problems, and therefore the provision of global public goods, are becoming ever more prominent – and with those problems, so does the need for global cooperation. Whereas social scientists ask under what circumstances states cooperate, lawyers ask *inter alia* who is responsible when something goes wrong and the public good is either not provided (such as climate change mitigation), or it is provided, but simultaneously third parties are injured (such as in peacekeeping missions). This Chapter was a first attempt to bring those two strands of thought together by asking how shared responsibility impacts upon the propensity of states to cooperate in the first place. Depending on how state responsibility is designed, the participation constraint of states in cooperative ventures comes into play. If international cooperation is desirable, one needs to take this constraint into account. It therefore seems reasonable to look at the game that states (and other actors) are playing when collaborating. While the compensation perspective has been rightfully considered, the other side of the equation needs to be taken into account as well, by using state responsibility as *explanans* for the propensity of states to cooperate in the first place. *Grosso modo*, if cooperation is desired, independent responsibility is not the best solution. Article 47 of the ARSIWA should be interpreted in a way that allows, if it is possible in any way, for proportional responsibility or JSL, with the possibility of recourse in order to accommodate the victim's perspective.

Note that all the arguments can be reversed in those cases where cooperation is not desired. If the common undertaking itself (hunting the stag as such, not the individual action) is unlawful (such as a common invasion of a third country), JSL or even independent responsibility for the whole harm (as in the ARSIWA) should be found for deterrence reasons, since it destabilises the unlawful relationship. This reasoning is well-known from competition law or fighting corruption, but it also applies to the desired hindrance of cooperation of states.

While this Chapter is a first attempt to explore the impact of state responsibility norms on the cooperative behaviour of states, further elaboration on the exact circumstances and institutional features is surely needed.