



## On the many as one : a reply to Kornhauser and Sager

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## **On the Many as One**

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In a recent paper on ‘The Many as One’, Lewis A. Kornhauser and Lawrence G. Sager look at an issue that we take to be of great importance in political theory.<sup>i</sup> How far should groups in public life try to speak with one voice, and act with one mind? How far should public groups try to display what Ronald Dworkin calls integrity?<sup>ii</sup> We do not expect the many on the market to be integrated in this sense. But should we expect integration among the many in the legislature, for example, or among the many on the courts?

We agree with Kornhauser and Sager about a number of their claims but think that they miss out on important detail and do not achieve a fully general perspective on the issues raised. Our own contribution is in three sections. We address, first, the nature of the integrity challenge; second, the range of cases in which the challenge arises; and third, the question of whether public groups should be designed and required to meet that challenge.

### **I. The nature of the integrity challenge**

In an important contribution from more than a decade ago Kornhauser and Sager argued that collegial courts are vulnerable to what they called the ‘doctrinal paradox’.<sup>iii</sup> Suppose a three-member court has to judge whether a defendant is liable in a tort case. According to legal doctrine, the defendant is liable if and only if there was harm done by the defendant and the defendant had a duty of care. Kornhauser and Sager showed that three judges, A, B, and C, may individually hold doctrinally impeccable judgments and yet the court’s majority judgments may violate the relevant legal doctrine. The court’s majority judgments may be, as in Table 1, that there was harm done, the defendant had a duty of care, and yet the defendant is not liable.

**Table 1. A Doctrinal Paradox**

	Harm done?	Duty of care?	Defendant liable?
Judge A	Yes	No	No
Judge B	No	Yes	No
Judge C	Yes	Yes	Yes
Majority	Yes	Yes	No

Let us say that a minimal condition for a system or subject to display ‘integrity’ is that the different propositions it supports are consistent with each other. The doctrinal paradox illustrates how a collegial court may fail to display integrity if it takes a majority vote on every proposition.<sup>iv</sup> It may support a set of propositions that is inconsistent, given that it also supports the background legal doctrine on how harm, duty of care and liability are interrelated.<sup>v</sup>

In their recent paper Kornhauser and Sager argue that the breach of integrity in this case shows how integrity may be breached in several parallel cases.<sup>vi</sup> Here we agree. One of us had earlier noted such parallels: a tight parallel between the doctrinal paradox and a difficulty that democratically deliberative bodies – for example, bureaucratic committees and commissions of inquiry – may have to confront;<sup>vii</sup> and a looser parallel with problems that groups may face when they are expected to display consistency in their judgments over time.<sup>viii</sup> The tight parallel applies when it is agreed that certain judgments are ‘reasons’ for or against making a certain judgment on some ‘outcome’ – in the way that legal doctrine makes judgments about harm and duty into reasons for or against making a certain judgment on the outcome of liability. The looser parallel applies when the only problem is to secure consistency in the judgments; no judgments are identified as reason-judgments that constrain a corresponding outcome-judgment.

Consider now the way that Kornhauser and Sager formulate the lesson of the doctrinal paradox.

In paradoxical cases, a group can rationally order its attitudes – beliefs, preferences, judgments – over the applicable reasons [e.g. the issues of harm and duty of care] by voting on them; or it can rationally order its attitudes over the applicable outcomes [e.g. the issue of liability] by voting on them; but it cannot do both. In contrast, an idealized individual ... could rationally order her views over both ... reasons and ... outcomes. If that is what integrity requires, perfect integrity is impossible for groups.<sup>ix</sup>

We think that this gives an inadequate picture of the available insights. First, Kornhauser and Sager consider sets of propositions that can be clearly subdivided into reason-propositions and outcome-propositions and whose interrelation is determined by some exogenous constraint, such as a background legal doctrine. We argue that the integrity challenge may arise without any such reason-outcome distinction or any such exogenous constraint; it can arise on a more general basis than they recognize.<sup>x</sup>

Second, Kornhauser and Sager run two questions together: that of how a group forms its collective judgments, and that of whether it displays integrity in its resulting

judgments. We argue that, by disentangling these two questions, we get a more engaging picture of the integrity challenge. Some recent technical results on the aggregation of judgments bring out the nature and generality of that challenge. The first of these results is an impossibility theorem proved by us in an earlier paper,<sup>xi</sup> which has been followed by several related theorems.<sup>xii</sup>

Our first task, then, is to show that the integrity challenge can arise on quite a general basis. To this end, consider a group of three individuals making judgments on the three logically interrelated propositions, ‘p’, ‘q’, and ‘if p then q’, with judgments as shown in Table 2.

**Table 2. A Discursive Dilemma**

	p	if p then q	q
Individual A	Yes	No	No
Individual B	No	Yes	No
Individual C	Yes	Yes	Yes
Majority	Yes	Yes	No

If this group takes a majority vote on every proposition, its resulting judgments are inconsistent: the group judges that ‘p’ and ‘if p then q’ are true, and yet that ‘q’ is false. As in the court example above, the group fails to display integrity. But here there is no background constraint such as the legal doctrine in the earlier example. And here it is not the case that some of the propositions are designated as reasons, others as outcomes. Some individuals might derive their judgments on ‘q’ from those on ‘p’ and ‘if p then q’, but others might consider ‘q’ more basic. The integrity challenge arises from the nature of group discourse on interrelated propositions in general, not from a doctrinal or other stipulation on which propositions are reason-propositions and which ones are outcome-propositions. Thus we prefer to speak here of a ‘discursive dilemma’ rather than a ‘doctrinal paradox’.<sup>xiii</sup>

To disentangle the question of how a group forms its judgments from the question of whether it displays integrity in these judgments — the second task advertised — we now introduce our impossibility theorem. Consider a group of two or more individuals, and a set of non-trivially interrelated propositions, as in the doctrinal paradox and discursive dilemma examples.<sup>xiv</sup> And suppose that the group members individually hold consistent and complete judgments on these propositions,<sup>xv</sup> and that the group is required to make equally consistent and complete collective judgments on the propositions.

Let an ‘aggregation procedure’ be a method for generating collective judgments about the propositions, based on the group members’ individual judgments about them. In the examples above, the aggregation procedure is propositionwise majority voting, according to which the collective judgment on each proposition is simply the majority judgment on that proposition. But there are many other possible aggregation procedures: a dictatorship of one individual, a propositionwise supermajority rule, a propositionwise unanimity rule, and so on. In this terminology, the doctrinal paradox and, more generally, the discursive dilemma show that, if a group uses propositionwise majority voting as its aggregation procedure, then it may fail to display integrity: its collective judgments may be inconsistent. However, this does not settle the question of whether a group might achieve integrity through some other aggregation procedure. After all, integrity is a condition on the consistency of group judgments and does not imply that the only eligible aggregation procedure for arriving at these judgments is propositionwise majority voting.

Our impossibility theorem states that there is no logically possible aggregation procedure that guarantees complete and consistent collective judgments, where the procedure satisfies three conditions. These conditions can and should be relaxed in various contexts, as we argue below, but they cannot be simultaneously satisfied by an aggregation procedure. The conditions are:

*Universal domain.* The procedure works for any combination of individual judgments.

*Anonymity.* The procedure treats every individual as equal, allowing no one special weight, as in giving them dictatorial or tie-breaking status.

*Systematicity.* The procedure treats every proposition as equal, letting the group judgment on the proposition be determined (in the same way) by individual judgments on that proposition.

Once the integrity challenge is understood in terms of this impossibility theorem, it assumes a more general and also more qualified character than in Kornhauser and Sager’s presentation. There are three points to highlight.

- The integrity challenge arises not only when some propositions are designated as reasons and others as outcomes; it arises for any set of non-trivially interrelated propositions. It may even arise for judgments that a group makes at different times, and for judgments that it makes without ever asking members after their reasons for voting as they do.<sup>xvi</sup>

- The integrity challenge arises not only when a group uses propositionwise majority voting as its aggregation procedure. It arises whenever a group uses an aggregation procedure satisfying universal domain, anonymity and systematicity; propositionwise majority voting is just one of many such procedures.
- Our impossibility theorem not only demonstrates the generality of the integrity challenge; it also allows us to identify possible ways in which a group might meet the challenge and achieve integrity. If a group uses an aggregation procedure that suitably relaxes one of the theorem's conditions, then the group is able to make judgments that are complete and consistent and so display integrity. More on this in the third section.<sup>xvii</sup>

## II. The range of the integrity challenge

Our understanding of the integrity challenge raises two questions. One concerns the range of cases in which the challenge arises. And the other bears on how far groups should organize themselves to meet that challenge. We address these issues in the remaining two sections.

Kornhauser and Sager distinguish between three cases of group decisions and ask after whether the integrity challenge arises in all.<sup>xviii</sup> In the first case, the members of a group seek to make collective decisions that reflect their individual preferences; an example is a group of people who go out to eat together regularly and who vote about the restaurant to patronize in each instance based on their individual tastes. In the second case, the members seek to determine the truth on some connected issues — they might be a community of experts — pooling their judgments on the relevant propositions with the aim of maximizing their collective truth-tracking reliability. And in the third case, the members have certain normative commitments — for example, commitments on fairness or efficiency — and seek to make collective judgments that answer best to their individual or shared commitments. Let us call these groups, for ease of reference, the restaurant-goers, the judgment-poolers, and the value-reasoners.

Kornhauser and Sager suggest that the integrity challenge does not really arise in the first two cases, only in the third.<sup>xix</sup> We think on the contrary that the challenge can arise in all three cases, depending on whether or not the group, as we put it, is

‘personified’. We borrow the term ‘personified’ from Ronald Dworkin — appropriately, since he uses it of groups that he takes to aspire to integrity.<sup>xx</sup>

To argue our view, we need to draw attention to something that has been largely implicit in the discussion up to now. Whenever we think that a group is subject to the integrity challenge, this is because we ascribe to it a commitment that does not figure explicitly among the propositions on which members vote. The collegial court is put under pressure by its majority judgments because not only is it taken to endorse the claims that there was harm done, there was a duty of care, and yet there was no tort-liability; it is also taken, under its continuing identity as one and the same body, to endorse the legal doctrine according to which the harm and duty-of-care claims imply that there was liability: this doctrine is implicit in the meaning of ‘tort-liability’. The group voting on ‘p’, ‘if p then q’ and ‘q’ is put under pressure because not only is it taken to endorse ‘p’, ‘if p then q’ and ‘not-q’; it is also taken, under its continuing identity as a group, to endorse the logical principle according to which ‘not-q’ is inconsistent with the conjunction of ‘p’ and ‘if p then q’: this principle is implicit in the meaning of the ‘if-then’ operator.

Could the extra group commitment be expressed as an additional proposition endorsed by the group? Could our group in the second case be taken to endorse ‘p’, ‘if p then q’, ‘if it is the case that p and that if p then q, then q’, and ‘not q’? Yes but, as Lewis Carroll taught us, it will then also have to be taken to endorse an unexpressed principle according to which ‘not-q’ is inconsistent with the conjunction of the first three propositions.<sup>xxi</sup> The inescapability of such an unexpressed background commitment — the commitment will remain inescapable, no matter how many propositions are added as premises — is unsurprising. Such a commitment amounts to accepting the meaning of the ‘if-then’ operator, implicitly endorsing the principles of logic. And no matter at what level the group operates, it will have to incur such a commitment and go where it leads.

When we take a group to endorse the background commitments by which the consistency of its judgments can be assessed, and to do this as one and the same, continuing entity, then in Dworkin’s sense we personify it. We treat it as an entity that can be held to its judgments both because it understands the implications of those judgments — it is not a mere parroting device — and because it purports to speak with one voice over time: it does not reject responsibility to prior judgments, on the grounds that its prior judgments were those of a distinct entity. The concept of a

person is precisely that of an intelligent, accountable entity of this kind; it is, as Locke claims, a forensic concept that enables us to keep track in intertemporal accounting.<sup>xxii</sup>

We suggest that a group is exposed to the integrity challenge whenever it is appropriate to personify it. This is certainly appropriate if the group aspires to personification or acquiesces in personification, as Dworkin supposes that the law-making, law-interpreting community does. With that claim in hand we can now return to the groups mentioned by Kornhauser and Sager. It is clearly appropriate to personify the value-reasoners, since they explicitly try to derive, as a continuing, purportedly intelligent entity, the implications of certain normative commitments. But what of the other two groups: the restaurant-goers and the judgment-poolers?

Suppose that I am one of the restaurant-goers; that on each occasion we members determine our destination by a majority vote; and that I who have rather conservative tastes routinely lose out. Suppose further that this is a matter of common awareness. Now the fact that I lose out may not bother me or anybody else if the group is just considered a loose collection of friends who decide by something like a lottery on where to eat each time. But it may bother me, and others too, if the group acquiesces in personification and, particularly, endorses background principles such as those democracy is often thought to entail: for example, the principle that it should deal fairly and equally with every member.<sup>xxiii</sup> Once I assume that the group is committed to such a principle, as a personified group, then I can point out that endorsing that principle is inconsistent with knowingly opting, time after time, for types of cuisine that I abhor. I can argue, in effect, that the group fails to display integrity.

What is true of the restaurant-goers is equally true of the judgment-poolers. If I and other members regard the group as a loose collection of individuals who pool their judgments solely to maximize the probability of determining the truth on some issue, then an inconsistency in the group's majority judgments creates no particular problem by itself; or if it does, that remains to be shown. For example, the group described in Table 2 could be right about 'q' despite being inconsistent. Suppose that 'q' is false because, although 'p' is true, 'if p then q' is false. In believing that 'q' is false, A is right about 'q' for 'the right reasons', accepting 'p' but rejecting 'if p then q'. In believing that 'q' is false, B is also right about 'q', albeit for 'the wrong reasons': B rejects 'p' and accepts 'if p then q'. And so the group's majority judgment about 'q' is right: two out of three group members judge 'q' to be false, although that

majority judgment on ‘q’ is inconsistent with the majority judgments on the other propositions.<sup>xxiv</sup>

This lack of integrity need not matter if we are treating the judgment-poolers merely as an instrument for testing the truth of some proposition. Just as with the restaurant-goers, however, things change if the group presents itself as an entity that has to answer for its judgments in the manner of a person, and answer for them across a range of propositions. If the group members acquiesce in such personification, then the group becomes exposed to the integrity challenge. It cannot aspire to personified status and claim to be indifferent to inconsistencies in the propositions it endorses.

We think that what is true of the groups just discussed is true of any groups imaginable. Let the group be appropriately personified, and it faces the integrity challenge. Let personification be inappropriate and the challenge does not arise.

### **III. Should public groups be required to meet the integrity challenge?**

Our final question is whether public groups should be designed and required to meet the integrity challenge.<sup>xxv</sup> The argument so far suggests that a group should be required to meet that challenge if it is appropriate to personify the group. Should we design any public groups, then, so that it is appropriate to personify them — so that they are ‘personifiable’? We should do this if such design is both feasible and desirable. We will address the feasibility question first and then look briefly at the question of desirability.

We assume that any personifiable group will have to endorse certain ends, perhaps externally given ones, and to pursue those ends according to judgments it endorses as its own; if the judgments are not its own then the group is merely a front for a separate center of judgment-formation. We know that the group may face a problem forming consistent judgments. And so a salient question of feasibility — if not the only one that might be raised under that heading — is whether this problem can be overcome.

Part of the attraction of our impossibility theorem, as we have argued elsewhere, is precisely that it directs us to ways beyond this problem.<sup>xxvi</sup> For a start, it implies that if a public group is willing to settle for less than a complete set of judgments on relevant propositions — if it is prepared to suspend judgment on some propositions — then the group may be able to satisfy the demands of consistency and integrity. This may not be much consolation, however, since groups may often want

to form judgments only on propositions with practical implications, so that suspending judgments may mean suspending action.<sup>xxvii</sup> But there is more consolation on offer, for our theorem also implies that if the group's aggregation procedure is allowed to breach any of the other conditions of the theorem, then the group may also be able to meet the demands of consistency and integrity.

Breaching anonymity, the aggregation procedure might treat individuals as less than equal, say by appointing a chair with the authority to ensure consistency or a court with the authority to impose consistency by interpretation. Or, breaching systematicity, it might treat propositions as less than equal, allowing earlier commitments to dictate later ones, or more general commitments to dictate more specific ones.<sup>xxviii</sup> Or, breaching universal domain, the procedure might try to elicit a certain, useful level of structure or shared conceptualization in group members' judgments by imposing a process of collective deliberation.<sup>xxix</sup>

The idea of a personified group is nothing more than a sham, of course, if these strategies are not part of a discipline of self-regulation in which members can participate or be in some sense complicit. One way of ensuring intense participation would breach systematicity in a democratically attractive way. The group would take a straw vote on every proposition that comes before it, say under a majoritarian system, and then resolve any looming inconsistency by reflectively deciding — maybe on this basis, maybe on that — about where best to break with majority judgments: whether on the current proposition under adjudication or on some proposition that was differently resolved at an earlier time.

Given these observations, it is clearly feasible to design bodies like legislatures, judiciaries, cabinets, departments of government, and public committees so that they can be personified. Is it also feasible to arrange for the personifiability of the people as a whole? This question goes to the heart of democratic theory. The people as a whole certainly operated as a personifiable entity in city-republics where it had the character of a corporate entity, organized in a highly participatory council.<sup>xxx</sup> But can it operate like this today? We think that it can insofar as government can be constrained by public opinion or public reason to the point where its judgments, at least on matters of principle, are reasonably treated as the people's own.<sup>xxxi</sup> The government will be like the council of the small city-republic except that it will not be guided by the routine, rotating presence of citizens, but by a more nebulous constraint.

Assuming that there are at least some public groups that can feasibly be made personifiable, we can turn to our second question. How desirable is it that such bodies should be made personifiable and required to display integrity?

We cannot address that normative question in detail here but we note that, under several positions in political theory, it is considered desirable to personify many groups of this kind. Republican theory, as Kornhauser and Sager note,<sup>xxxii</sup> requires public bodies to be contestable in their decision-making, on pain of appearing as arbitrary, dominating presences in the lives of citizens.<sup>xxxiii</sup> Dworkin's theory requires the decisions of the legislature and the courts to represent a single, principled voice, not a set of unrelated dictates.<sup>xxxiv</sup> Rawls's and Habermas's theories require that government be able to justify how it is constituted and how it behaves to its citizenry.<sup>xxxv</sup> And the many versions of deliberative democracy all converge on the requirement that government be deliberatively sensitive to the views of citizens and deliberatively responsive to their challenges.<sup>xxxvi</sup> These desiderata cannot be realized unless the relevant public bodies live up to a discipline that makes them personifiable entities, exposed to the challenge of displaying integrity.

To conclude, then, it appears that many public groups should be designed and required to meet the integrity challenge. We hope that the considerations mustered here show that the question as to exactly which groups should be constructed in this way deserves much further consideration and that it connects with a variety of important issues in the theory of group-formation. The considerations raised give a more general cast to the claims made by Kornhauser and Sager. We reject the idea that the pursuit of integrity is focused in any substantive measure on reason-based voting and we reject the attempt to tie the integrity challenge to the lesson of the doctrinal paradox, narrowly construed. But we welcome their emphasis on the need to think about how far public bodies can and should be required to display integrity, performing as personified presences in political life. We offer this commentary as an attempt to generalize their perspective rather than to confound it.<sup>xxxvii</sup>

## Notes

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<sup>i</sup> L. A. Kornhauser and L. G. Sager, "The Many as One: Integrity and Group Choice in Paradoxical Cases," *Philosophy and Public Affairs* 32 (2004): 249-76.

<sup>ii</sup> R. Dworkin, *Law's Empire* (Cambridge, Mass.: Harvard University Press, 1986).

<sup>iii</sup> L. A. Kornhauser and L. G. Sager, "Unpacking the Court," *Yale Law Journal* 96 (1986): 82-117; "Modelling Collegial Courts. I. Path-Dependence," *International Review of Law and Economics* 12

(1992): 169-85; “Modelling Collegial Courts. II. Legal Doctrine,” *Journal of Law, Economics and Organization* 8 (1992): 441-70.

<sup>iv</sup> We do not suggest that majority voting on every proposition is the best decision method here. In fact, we suggest below that giving up propositionwise majority voting may be necessary for the achievement of integrity.

<sup>v</sup> Formally, by the ‘background legal doctrine’ we mean the proposition that the defendant is liable if and only if there was harm done by the defendant and the defendant had a duty of care. This background legal doctrine is treated as exogenously fixed in the present example.

<sup>vi</sup> Kornhauser and Sager, “The Many as One.”

<sup>vii</sup> P. Pettit, “Deliberative Democracy and the Discursive Dilemma,” *Philosophical Issues* (supplement to *Nous*) 11 (2001): 268-99.

<sup>viii</sup> P. Pettit, *A Theory of Freedom: From the Psychology to the Politics of Agency* (Cambridge and New York: Polity and Oxford University Press, 2001), Chapter 5. For more detail, see P. Pettit, “Groups with Minds of their Own,” in F. Schmitt, *Socializing Metaphysics* (New York: Rowan and Littlefield, 2003), pp. 172-75. P. Pettit, “Deliberative Democracy, the Discursive Dilemma, and Republican Theory,” in J. Fishkin and P. Laslett (eds), *Philosophy, Politics and Society Vol 7: Debating Deliberative Democracy* (Cambridge: Cambridge University Press, 2003): 138-62. Kornhauser and Sager refer to “Groups with Minds of their Own”, but still accuse Pettit of ignoring the diachronic perspective and of differing in this respect from Dworkin.

<sup>ix</sup> Kornhauser and Sager, “The Many as One,” p. 252.

<sup>x</sup> Crucially, the majority judgments in Table 1 are not inconsistent by themselves. They are inconsistent only if it is accepted in addition that the defendant is liable if and only if there was harm done by the defendant and the defendant had a duty of care. By contrast, the majority judgments in Table 2 below are inconsistent by themselves (in the standard sense of propositional logic).

<sup>xi</sup> C. List and P. Pettit, “Aggregating Sets of Judgments: An Impossibility Result,” *Economics and Philosophy* 18 (2002): 89-110. See also C. List and P. Pettit, “Aggregating Sets of Judgments: Two Impossibility Results Compared,” *Synthese* 140(2004): 207-35.

<sup>xii</sup> C. List, “A Possibility Theorem on Aggregation over Multiple Interconnected Propositions,” *Mathematical Social Sciences* 45 (2003): 1-13; “A Model of Path Dependence in Decisions over Multiple Propositions,” *American Political Science Review* 98 (2004): 495-513. M. Pauly and M. van Hees, “Logical Constraints on Judgment Aggregation,” *Journal of Philosophical Logic*, forthcoming. F. Dietrich, “Judgment Aggregation: (Im)possibility Theorems,” *Journal of Economic Theory*, forthcoming. P. Gärdenfors, “An Arrow-like theorem for voting with logical consequences,” *Economics and Philosophy*, forthcoming. F. Dietrich and C. List, “Strategy-proof judgment aggregation,” Working paper (LSE, 2004); “A liberal paradox for judgment aggregation,” Working paper (LSE, 2004); “Arrow’s Theorem in Judgment Aggregation,” Working paper (LSE, 2005). K. Nehring and C. Puppe, “Consistent judgement aggregation: A characterization.” Working paper (University of Karlsruhe, 2005). For a discussion of judgment aggregation from a political theory perspective, see C. List, “The Discursive Dilemma and Public Reason,” *Ethics*, forthcoming.

<sup>xiii</sup> Pettit, “Deliberative Democracy and the Discursive Dilemma.” See also List and Pettit, “Aggregating Sets of Judgments: An Impossibility Result.”

<sup>xiv</sup> A set of propositions is ‘non-trivially interrelated’ if it is of one of the following forms (or a superset thereof): (i) it includes  $k > 1$  propositions ‘ $p_1$ ’, ..., ‘ $p_k$ ’ and either their conjunction ‘ $p_1$  and ... and  $p_k$ ’ or their disjunction ‘ $p_1$  or  $p_2$  or ... or  $p_k$ ’ or both (and the negations of all these propositions); (ii) it includes  $k > 0$  propositions ‘ $p_1$ ’, ..., ‘ $p_k$ ’, another proposition ‘ $q$ ’ and either the proposition ‘ $q$  if and only if ( $p_1$  and ... and  $p_k$ )’ or the proposition ‘ $q$  if and only if ( $p_1$  or  $p_2$  or ... or  $p_k$ )’ or both (and negations); (iii) it includes propositions ‘ $p$ ’, ‘ $q$ ’ and ‘if  $p$  then  $q$ ’ (and negations). This definition is given in List, “The Discursive Dilemma and Public Reason.” For more general definitions of non-trivial interrelation, see Dietrich and List, “Arrow’s Theorem in Judgment Aggregation”.

<sup>xv</sup> An individual’s judgments on the relevant propositions are consistent if the set of propositions accepted by the individual is a consistent set in the standard sense of propositional logic; an individual’s judgments are complete if, for every relevant proposition, the individual accepts either the proposition or its negation. The consistency and completeness of collective judgments is defined in the same way.

<sup>xvi</sup> Here it can be shown that, if a group seeks to achieve integrity in its judgments over time, these judgments may be path dependent, that is, dependent on the order in which propositions are considered. List, “A Model of Path-Dependence in Decisions over Multiple Propositions.” Ironically, as noted above, Kornhauser and Sager suggest that their approach goes beyond Pettit, whom they accuse of focusing on ‘synchronic, reason-based’ issues (Kornhauser and Sager, “The Many as One,” p. 255). In

taking this line, they ignore the insistence in several texts, including the one on which they rely, that the problem is diachronic as well as synchronic and that it does not require the prior privileging of premises. See Pettit, *A Theory of Freedom*, Chapter 5. P. Pettit, “Groups with Minds of their Own”. List and Pettit, “Aggregating Sets of Judgments: An Impossibility Result.”

<sup>xvii</sup> A survey of several relevant technical results and their implications for different philosophical accounts of collective decision making is given in List, “The Discursive Dilemma and Public Reason.”

<sup>xviii</sup> Kornhauser and Sager, “The Many as One,” p. 256; in fairness, they specifically address the issue of what they call — misleadingly, as we see it — ‘reason-based integrity’.

<sup>xix</sup> Kornhauser and Sager, “The Many as One,” p. 256. They argue in this case, congenially, that no normative commitments should generally be privileged in such a way that, regardless of the specific decision in question and their implications for that decision, revision is ruled out. We agree with this last point, of course, believing like Kornhauser and Sager in Rawls’s reflective equilibrium; we can readily accommodate the point, since by our analysis the failure of consistency is the primary problem raised in paradoxical cases, not the rejection of any doctrinal prioritizing of reasons.

<sup>xx</sup> Dworkin, *Law's Empire*, p. 167.

<sup>xxi</sup> L. Carroll, “What the Tortoise said to Achilles,” *Mind* 4 (1895): 278-80.

<sup>xxii</sup> J. Locke, *An Essay Concerning Human Understanding* (Oxford: Oxford University Press, 1975): sect. 26. See also Pettit, *A Theory of Freedom*, who draws on C. Rovane, *The Bounds of Agency: An Essay in Revisionary Metaphysics* (Princeton, NJ: Princeton University Press, 1997).

<sup>xxiii</sup> Kornhauser and Sager, “The Many as One,” p. 258.

<sup>xxiv</sup> For a discussion of truth-tracking for the ‘right’ and ‘wrong reasons’, see P. Pettit and W. Rabinowitz, “Appendix to ‘Deliberative Democracy and the Discursive Dilemma,’ ” *Philosophical Issues* 11 (2001): 268-99; L. Bovens and W. Rabinowicz, “Complex Collective Decisions: An Epistemic Perspective,” *Associations* 7 (2003): 37-50; C. List, “The Probability of Inconsistencies in Complex Collective Decisions,” *Social Choice and Welfare* 24 (2005): 3-32.

<sup>xxv</sup> See Pettit “Deliberative Democracy, the Discursive Dilemma, and Republican Theory.” Kornhauser and Sager, “The Many as One”, take the case of the legislature and focus, not on the general question, but rather on the specific question of how far a legislature might conduct its business on the basis of ‘reason-based voting’. Unsurprisingly, and surely correctly, they are pessimistic about the possibility of getting a legislature to accommodate its decision-making to such a procrustean mould.

<sup>xxvi</sup> List and Pettit, “Aggregating Sets of Judgments: An Impossibility Result.” List, “The Discursive Dilemma and Public Reason.”

<sup>xxvii</sup> For a discussion of different types of incomplete agreements in this context, see List, “The Discursive Dilemma and Public Reason.”

<sup>xxviii</sup> For technical results, see List, “A Model of Path Dependence in Decisions over Multiple Propositions” and “The Discursive Dilemma and Public Reason.” The route is also defended in Chapman, “Rational Aggregation,” *Politics, Philosophy and Economics* 1 (2002): 337-354.

<sup>xxix</sup> For technical results, see List, “A Possibility Theorem on Aggregation over Multiple Interconnected Propositions.” An informal discussion is given in List, “Two Concepts of Agreement,” *The Good Society* 11 (2002): 72-79.

<sup>xxx</sup> J. P. Canning, “Ideas of the State in Thirteenth and Fourteenth Century Commentators on the Roman Law,” *Transactions of the Royal Historical Society* 33 (1983): 1-27.

<sup>xxxi</sup> See P. Pettit ‘Rawls’s Peoples’ in R. Martin and D. Reidy (eds), *Envisioning a New International Order* (Oxford: Blackwell, 2006).

<sup>xxxii</sup> Kornhauser and Sager, “The Many as One,” p. 252.

<sup>xxxiii</sup> Pettit, *A Theory of Freedom*, Chapter 7 and P. Pettit, *Republicanism: A Theory of Freedom and Government* (Oxford: Oxford University Press, 1997).

<sup>xxxiv</sup> Dworkin, *Law's Empire*, p. 165.

<sup>xxxv</sup> J. Rawls, *Political Liberalism* (New York: Columbia University Press, 1993). J. Habermas, *Between Facts and Norms: Contributions to a Discourse Theory of Law and Democracy* (Cambridge, Mass.: MIT Press, 1995).

<sup>xxxvi</sup> See also List, “The Discursive Dilemma and Public Reason.”

<sup>xxxvii</sup> We are grateful for very useful comments provided by the editor and two anonymous readers.