**AGGREGATING REASONS**[*]

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Economic theory and legal theory can both claim to provide plausible accounts of rational decision-making. Yet, despite the growth of "law and economics" as a hugely successful area of interdisciplinary study, there is very little intellectual exchange between the rational choice theorist who attempts to explain economic behaviour on the one hand, and the more philosophically inclined theorist who seeks to comprehend legal reasoning and adjudication on the other. Thus, the claim that each sort of theorist makes to account for rational decision-making seems largely to go unanswered by the other, this despite the fact that the two disciplines are otherwise so interconnected.

While the two sorts of theory loosely understand the rationality of a set of decisions in the same way, namely as an "ordered particularity", the notion of ordering is crucially different between the two. In economics, no matter how diverse the motivations for choice might appear to be, the idea of an ordering remains somewhat single-minded and "quantitative", the sort of thing over which a chooser can *maximize*. But in law the notion of an ordering is less quantitative and more "categorical", the sort of thing that informs an *understanding*. One of the challenges for

those of us who do research on rational decision-making is to comprehend the intellectual difference between these two accounts of rationality in a way that makes each accessible to the other, that is, that puts them within some common theoretical framework.

In an earlier paper[1] I attempted to develop such a framework by beginning with the economic theory of social choice, a theory that was originally developed to be general enough to embrace rational choice in both market and political institutions. My claim was that some very basic requirements of that theory would need to be relaxed if the legal practice of giving publicly accessible reasons for a decision was properly to be comprehended within it. However, by proceeding in this way, from a beginning in rational choice through the specific adjustments required to provide for the inclusion of legal reason within that framework, my hope was that we would at least have a very precise sense of where the difference in the understanding of rationality between economics and law was to be found.

I also thought that the argument in the earlier paper showed that there might be some advantage, even for what the economist seeks to accomplish, in introducing the legal notion of publicly accessible reasons into the domain of rational choice. My claim was that the discipline of having to offer publicly articulated and comprehensible reasons in support of one's choices might help to remove some of the systematic instability (or cyclical preference) that is characteristic of social choice theory in particular. My argument was that some decisions would be harder to make (perhaps, even harder to conceive), and certain decisive coalitions harder to form, if reasons had to be offered for the decision being proposed. Since the instability of social choice was to some extent the consequence of an *excess* of apparently rational decision-making (at least in the economic sense of "rational"), the extra discipline that was introduced by the obligation to provide reasons seemed to be a good thing.

However, in two recent papers[2] Christian List and Philip Pettit claim that there is a problem in the aggregation of reasons that is akin to the aggregation problem in social choice theory. Indeed, List and Pettit prove a new general "impossibility theorem" for the aggregation of reason, and provide a propositional interpretation of the social choice problem that suggests it is a special case of their impossibility result.[3] Thus, while their paper supports my view that social

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[1] Chapman (1998a)

[2] List and Pettit (2001a), (2001b)

[3] List and Pettit (2001b) are careful to point out that, strictly speaking, their impossibility result does not completely overlap Arrow's result. The conditions that they prove to be inconsistent are somewhat different from Arrow's, even if one puts Arrow's preference rankings in their judgemental form. What they do offer is an impossibility result that

choice theory might provide a general enough framework to begin the integration of the two different conceptions of rationality that I identified above, it does not exhibit the same optimism for introducing the discipline of public reason as a method for *avoiding* the problems of social choice. Rather, their claim is that the aggregation of reason is as much subject to collective irrationality as the aggregation of preference.

In this paper I resist the List and Pettit claim that there is the same propensity for collective irrationality or incoherence in the aggregation of reason as there is in the aggregation of preference. I argue that reason has the effect of giving conceptual priority to some aggregations over others and that this avoids the incoherence that would otherwise exist if these different aggregations, not consistent with one another, were to compete at the same level of priority. The conceptual priority of some aggregations is particularly apparent, I shall argue, if one views the aggregation of reason through the lens of common law decision-making.

## A. Two Problems of Aggregation

In this section I present the two different aggregation problems to which I have already referred. In section B I will outline the List and Pettit argument for seeing these two problems as similar in their construction. In section C I claim that this argument for similarity fails and that there is more structure in the so-called "discursive paradox", based as it is on the aggregation of reason. This additional structure provides (quite literally) for a *sensible* way out of that paradox, one that is not available in the social choice problem based as it is on a *senseless* aggregation of mere preference.

## 1. The discursive paradox

The problem of aggregating reason is nicely illustrated by the so-called discursive paradox. In legal circles it is sometimes referred to as the doctrinal paradox and the following example, based on contract law, shows the general structure of the problem.[4]

Suppose that a panel of three judges must decide whether a defendant should pay damages

comprehends the majority voting paradox, that is, the same paradox that is so often used to exemplify Arrow's more general social choice problem.

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[4] Kornhauser (1992) seems to have been the first to coin the term "doctrinal paradox", although the phenomenon, without a name and for only a very brief discussion, seems first to have appeared for discussion in Kornhauser and Sager (1986). As already indicated, I first introduced the doctrinal paradox into a social choice framework in Chapman (1998a).

to a plaintiff for breach of contract. After hearing all the arguments, Judge *A* believes that there is a contract, but that the defendant has not breached it in this case.

Thus, he is inclined to find for the defendant. Judge *B*, on the other hand, believes that the conduct in question does amount to a breach, but that the contract here has not been properly formed. Thus, she too would find in favour of the defendant, albeit for a reason different from that offered by Judge *A*. Finally, Judge *C* finds both that there is a contract and that it has been breached. Judge *C*, therefore, would favour the plaintiff's claim. Thus, a majority of the judges, *A* and *B*, share the view that the defendant should win in this case and, absent an obligation to provide reasons, would choose that as their preferred result. The views of the different judges are represented in summary form in Table 1 below.

|  | (1) **Was there a contract?** | (2) **Was there conduct constituting breach?** | (3) **Was there a breach of contract?** |
|---|---|---|---|
|  |  |  |  |
| **Judge *A*** | Yes | No | No |
| **Judge *B*** | No | Yes | No |
| **Judge *C*** | Yes | Yes | Yes |
| **Majority** | **Yes** (2:1) | **Yes** (2:1) | **No** (2:1) |

**Table 1**

Does the obligation to provide reasons for a judicial outcome make a difference? It seems that it might induce at least a moment's hesitation in Judges *A* and *B*. After all, while Judges *A* and *B* have a *shared preference* for a particular legal outcome (indicated in column 3), it is not at all clear that they have a *shared understanding* of *what it is* they are doing to reach that outcome. There are two legal issues underlying this case, the breach issue and the contract formation issue.[5] These are the issues that make the case rationally comprehensible to us, a proper object of our legal understanding. Yet, on each of these salient legal issues in the case, the two judges who form the majority in favour of the defendant have completely opposed views (as indicated in columns 1 and 2).

It seems less obvious, therefore, that there is a majority agreement between these two

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[5] Of course, it is possible that these issues might break down even further into sub-issues, thus generating another iteration of the doctrinal paradox at this lower level. Some might argue that this attests to a general indeterminacy in the structure that makes the paradox possible, something that renders it less important; others might argue that this only goes to show that there is a greater frequency in its occurrence, something that might magnify its significance. For debate around this question, see Rogers (1996) and Post and Salop (1996).

judges on *any matter in law*. Certainly, it would be a challenge for this majority, despite their shared preference for a particular legal outcome favouring the defendant, to articulate any common or coherent legal view supporting that result. We might say that their shared sense of an appropriate *doing* is hampered somewhat by their inability to offer a publicly comprehensible shared *saying* for what they do. Indeed, to the extent that there is any majority agreement on the salient legal issues in this case, it is that a majority of the court believes both that there *is* a contract *and* that it has been breached (as summarized by the last row of columns 1 and 2). That is where the majority's shared reasons are, and they are in tension with the majority preference for an outcome that denies the plaintiff her remedy (last row of column 3). Because this is a tension about what one can say in support of what one wants to do (or, alternatively, what one can do given what one must say[6]), it is referred to as the *discursive paradox*.[7] However, before analysing it in more detail, it is useful to lay out our second sort of aggregation problem, the problem of social choice.

## 2. The problem of social choice

Although (as Kenneth Arrow proved in his influential book[8]) the scope of the social choice problem is much more general, it is still nicely and simply exemplified by the majority voting paradox. Suppose that there are three voters *A*, *B*, and *C*, who are considering a choice amongst three mutually exclusive alternatives *x*, *y*, and *z*. The voters rank the three alternatives in the following way (for each voter in order of preference from left to right):

| Voter *A*: | *x* | *y* | *z* |
|---|---|---|---|
| Voter *B*: | *y* | *z* | *x* |
| Voter *C*: | *z* | *x* | *y* |

If the three voters are intent on resolving the matter by majority vote, there is a problem. Alternative *x* is majority preferred to alternative *y*, alternative *y* is majority preferred to alternative *z*, and alternative *z* is majority preferred to alternative *x*. Thus, since each alternative has another

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[6] This is the particular use to which I put the paradox in Chapman (1998a). I have tried to extend the claim beyond social choice theory to the theory of games in Chapman (2000).

[7] List and Pettit (2001a) use this term in their joint paper, although in Pettit (2000) and (2001) Pettit himself indicates a preference for the term "discursive dilemma".

[8] Arrow (1963)

that is preferred to it by a majority of the voters, there is no way here for a majority of the voters (even if they consider the alternatives in pairs) to choose anything but a minority preferred alternative. For this reason the problem is often referred to as the *paradox of majority voting*.

The paradox can also be characterized as a problem of instability or arbitrariness. For if the voters attempt to be continually responsive to what the majority demands, then none of the alternatives offers the possibility of equilibrium. Since every alternative has another alternative that is majority preferred to it, there is always the temptation for a majority to move the group on to yet another such preferred alternative. The result is an endless cycle. On the other hand, if the voters try to avoid this instability problem by adopting the rule that an alternative that has already been rejected should not be reconsidered, then the alternative that is finally chosen is simply the one fortunate enough not to be considered in the first vote. For example, if the voters were to consider the pair ($x$, $y$) first, a majority would choose $x$, but then a different majority would choose $z$ from the remaining pair ($x$, $z$). On the other hand, if the voters considered the pair ($x$, $z$) first, then $z$ would be the majority's choice, but it would be defeated by $y$ on the next (and last) majority vote over the remaining pair ($y$, $z$). This difference is typically referred to as the problem of *path dependence*, that is, the problem that the final choice is determined (arbitrarily or strategically, it is suggested) by the choice path.[9]

The question for our purposes is whether there is any connection between the paradox of majority voting (exemplifying a more general problem of social choice) and the discursive or doctrinal paradox (exemplifying a general difficulty in the aggregation of reason). At first glance there would seem to be none. For a start, the paradox of majority voting is about a failure to achieve an ordering over different possible choices, a problem that goes to the relationship between different decisions. The discursive paradox, on the other hand, is about a single choice and the apparent anomaly that the outcome that a group wants is not well grounded in any of the reasons that the group might rationally be tempted to offer in support of that outcome. Thus, the cyclical instability over different choices that is so much at the centre of the former sort of problem does not even seem to be a possible issue in the latter.

Second, there would seem to be a fundamental difference in the sort of *space* within which the two sorts of aggregation problem work. In the voting paradox the working space is preference

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[9] Arrow (1963, at 120) argued that collective rationality, or full transitivity of the social preference relation, was required if the arbitrariness of path dependence was to be avoided. In fact something less than full transitivity will do the trick. For discussion, see Plott (1973) and Blair, *et al*. (1976). For argument that not all path dependence should be construed as *arbitary* path dependence, either because some choice sequences make more conceptual sense than others, or because they are normatively significant under certain process values, see Chapman (1998a), (1998b).

or utility, the sort of thing that choosers can typically maximize and which lends itself to quantitative assessments of "better" and "worse". But in the discursive paradox the distinctions seem more qualitative and categorical, the stuff of neat, separate columns, and of firm judgments "Yes" and "No". This seems to be what puts the discursive paradox more into the domain of rational understanding than rational choice and preference maximization. While we can, perhaps in some less mediated way, *see* what Judges *A* and *B* might want to do together in Table 1, it is harder for us to understand exactly *what it is* that they are up to because we cannot organize their joint behaviour under a common set of concepts.

Now it is part of the List and Pettit argument to challenge the latter distinction between the two sorts of aggregation problem. They argue effectively that the majority voting paradox can be given a propositional interpretation that makes it look structurally very similar to the discursive paradox. I present this argument in section B and then in section C offer some reasons for being wary of it.

### B. Majority Voting as a Discursive Paradox

The representation of the paradox of majority voting as a discursive paradox is relatively straightforward. Instead of having the voters vote their preference for, say, *x* over *y*, they are asked to give their assent to the ranking proposition "*x* > y" (meaning "*x* is socially preferred to *y*"). Further, to the extent that each voter is rational, each will assent to what transitivity of a ranking requires, viz., that for any triple *x*, *y*, *z*, an assent to "*x* > y" and to "*y* > z" implies an assent to "*x* > z". List and Pettit refer to this in the propositional context as a requirement of *deductive closure*, viz., that, more generally, an assent to proposition *p*, and an assent to proposition *q*, requires the assent to proposition *r*, at least if *p* & *q* → *r* and the assenter is fully rational.[10] Thus, the majority voting paradox referred to earlier would, in discursive paradox

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[10] Brennan (1998) offers an argument for being sceptical that deductive closure should necessarily be a property of even *individual* rationality. For suppose that belief in, or assent to, a proposition *s* is represented by a degree of confidence in the truth of s which is greater than some threshold $p^*$, where *p* is thought of as the probability that *s* is true. Then it might be perfectly rational to believe *s* and to believe *t* (each in isolation) on such a basis, but not to believe in their conjunction (*s* & *t*) even though the conjunction represents the deductive closure on what the individual otherwise believes. Such would be the case if the compound probability of the conjunction fell below $p^*$. Brennan thinks the argument supports our giving more credence to our judgement over outcomes than our judgement over the underlying reasons. However, I consider a similar sort of situation below, text at n. 17, and there the argument is that we should insist that the individual organize her probability assessments under the relevant reasons, and *not* allow the individual to make a credible claim simply because she can point in some unreasoned way (even probabilistically) to the possibility of *some* reason. The difference in our views goes to the sort of claim that is being made, and the precise nature of the burden of rationality that it must carry. Some claims, even if they are right, or right more probably than not, may not be right for the right reasons, and it is an open question, at least, whether they are then both right and rational.

format, be represented as in Table 2.

|  | (1) **Was there a contract?** | (2) **Was there conduct constituting breach?** | (3) **Was there a breach of contract?** |
|---|---|---|---|
|  |  |  |  |
| **Judge *A*** | Yes | No | No |
| **Judge *B*** | No | Yes | No |
| **Judge *C*** | Yes | Yes | Yes |
| **Majority** | **Yes** (2:1) | **Yes** (2:1) | **No** (2:1) |
| | **(1) "x > y"** | **(2) "y > z"** | **(3) "x > z"** | **(4)** | **(5) "z > x"** |

**Table 2**

Thus, there is (majority) group support for proposition *p* (column 1), for proposition *q* (column 2), and for the deduction that $p \& q \rightarrow r$ (column 4). Indeed, there is unanimous support for the deduction since it is assumed that all the voters are *individually* rational and, therefore, accept this as a rationally required property of a ranking. But there is not (majority) group support for the deductive closure on these propositions as indicated by the group's (majority) non-acceptance of proposition *r* (in column 3) and, further, the group's (majority) acceptance of proposition ~*r* (in column 5).[11] In this sense, therefore, the group is not *collectively* rational. Either it does not embrace deductive closure or, if it does, it embraces the inconsistency of *r* and ~*r*.

Now it might be objected that there is something seriously amiss in even entertaining the idea of a propositional interpretation of the voting paradox. While there is something normatively attractive in choosing what a majority prefers,[12] the idea that a majority might have a better understanding or judgement of some proposition, simply because that is the majority view, seems more suspect. This is undoubtedly a deep issue that requires more attention than I can give it here. However, we can make the view seem somewhat more plausible, at least initially, if we invoke the so-called Condorcet jury theorem. Condorcet showed that if you could assume that any one voter is more likely to be right than wrong about any given proposition, and supposing that all voters had the same such likelihood of being right, then a majority of such voters is more likely to

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[11] The non-acceptance of *r* need not be the same as the rejection of *r* or (equivalently) the acceptance of ~*r*. For example, the group may not have a view about *r* at all. Hence, the somewhat awkward redundancy of referring to both columns 3 and 5.

[12] For a social choice theoretic interpretation of the underlying normative axioms that define simple majority rule, see May (1952).

be right in its majority view than is any one of the voters.[13] This does suggest that we should attach some greater credence to what the majority view might be on any given proposition. However, now the discursive paradox will suggest that there might be something incoherent about believing, with Condorcet, that the majority is more likely to be right than wrong in every one of the columns across the bottom row of Table 2. After all, the results in these different columns are not consistent with one another. Thus, while the Condorcet jury theorem might give the propositional interpretation of the majority voting paradox some initial support and momentum, it simply goes on to pose the discursive paradox in a special way. [14]

It is also worth emphasizing that while List and Pettit use the majority voting rule to exemplify the discursive paradox, their general impossibility result holds for a much broader group of *judgement aggregation functions*. Their proof shows that the sort of problem exemplified in Tables 1 and 2 can arise for *any* such judgement aggregation function *F*, whose input is a profile of individual judgements on propositions (like those appearing across the different rows in the Tables), and whose output is a corresponding collective set of judgements to be endorsed by the group as a whole (like the set represented by the last row in the Tables), which seeks to satisfy certain minimal conditions. While these conditions (and their ultimate inconsistency) are exemplified by majority voting, they are minimal in the sense that they allow for a whole range of imaginable aggregation procedures.

Specifically, List and Pettit propose that any such function *F* should satisfy three conditions, viz., *universal domain*, *anonymity*, and *systematicity*. Universal domain requires that *F* should accept as admissible any logically possible profile of individual judgements so long as each set of individual judgements itself satisfies certain minimal rationality conditions (e.g., consistency, deductive closure, etc.). The idea here is to be open to a broad range of possible inputs; an aggregation function would hardly be viewed as satisfactory if its success depended upon restricting the sorts of individual judgements it had to reconcile. The anonymity condition merely formalizes the idea that no individual's judgement should count for more than that of

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[13] Condorcet (1976). The general argument is easy to illustrate. (I borrow the following neat illustration from Pettit (2001)) Suppose that in our group of three, A, B, and C, any one of us has an independent 2/3 chance of being right. The group will be right when at least two of us (i.e., a majority) is right. The chance of this happening is the chance of *either* A and B (but not C) being right, *or* B and C (but not A) being right, *or* A and C (but not B) being right, *or* A, B, and C all being right. The chance of this disjunction is the sum of the probabilities of each of its four terms, or 4/27 + 4/27 + 4/27 + 8/27 = 20/27, which is higher than the 2/3 (or 18/27) chance that any one of us is right.

[14] For a thorough discussion of the interaction between the Condorcet jury theorem and the discursive dilemma, see Pettit (2001), Appendix (with Wlodek Rabinowicz). This discussion is relevant to the issue of choosing between being right and being right for the right reasons; see above note 10.

someone else simply because of who that individual is (rather than, say, how good her judgement is). Finally, according to systematicity, the group judgement on any one proposition should depend only on the individual judgements on that proposition and, further, there should be the same sort of dependence holding between the group judgement and the individual judgements for every proposition. Thus, if two propositions have the same support from the same people, then systematicity requires that they generate the same group judgement. When this idea is combined with anonymity, it becomes a requirement that if two propositions have the same degree of support, though perhaps not from exactly the same individuals, then the group judgement on the two propositions should be the same.

## C. A Critique of Systematicity

Although List and Pettit claim that their conditions are minimal, I now want to argue that the third, the condition of systematicity, is implausible as a general requirement for a judgement aggregation function. Moreover, and somewhat ironically perhaps, it is List and Pettit's own propositional interpretation of the majority voting paradox that suggests why this is so. In this section I will try to make my point in an introductory way by offering a comparison, mediated by other examples, of the quite different sorts of aggregation that are going on in Tables 1 and 2. In the next section I will try to reinforce the point by arguing that a different version of the discursive paradox, one that (like the voting paradox) opens up the possibility of incoherence across *different* decisions, argues for resolving that paradox in a way that, while sensible, violates the systematicity condition in a very particular way.

Consider again the discursive paradox as represented in Table 1 showing the breach of contract example. The paradox there is to be found in the fact that, in the last row, deductive closure on the group's judgements in columns 1 and 2 should have generated a "Yes" vote in column 3. Yet the same majority aggregation coming down column 3 generates a "No". Thus, the example forces us either to reject deductive closure across the columns (which is just to embrace the inconsistency that is manifested by the paradox) or to reject, coming down at least one column, the result that the majoritarian aggregation function delivers in the last row. This last choice, of course, would involve relaxing the systematicity condition.

Now List and Pettit argue effectively that rejection of deductive closure is not a real option, at least for anyone who wants to take seriously the possibility of a rational aggregation of group judgements. But they do consider the possibility of relaxing systematicity. The problem,

they suggest, is in deciding which column, 1, 2, or 3, should be the one to have its majoritarian judgement relaxed. Without an argument focused on this particular issue, there is merely the symmetry of the three different majoritarian judgements within each column and no reason to give any of these judgements a greater or lesser priority. This symmetry is precisely what is captured by systematicity.

List and Pettit recognize that some will be tempted to see a greater symmetry between the judgements in columns 1 and 2 in Table 1 than between the judgements in columns 1 and 3 or columns 2 and 3. After all, the judgements in columns 1 and 2 are each formed around the atomic propositions (or premises) that make up or constitute the compound proposition (or conclusion) that is found in column 3. Thus, a plausible prioritizing strategy, in the manner of *modus ponens*, might be to let the majority views on each of the two premises simply dictate the group's view on the conclusion, that is, to accept the last row under columns 1 and 2, but reject the last row of column 3. However, List and Pettit reject this as too simple an understanding of what constitutes a prior premise:

What determines whether someone will see a proper subset of the propositions on which they and their group have to judge as fit to be judged as premises? People often differ in the background assumptions they make as to which sort of propositions matter most, and for this reason they will often differ in which propositions, if any, they see as fit for treatment as premises. For one person certain atomic propositions … may seem most natural to be treated as premises in relation to a compound proposition…on which they also have to judge. For another it may seem that that compound proposition lends itself more readily to resolution than any of the atomic propositions, so that assent to the atomic propositions ought to be shaped by whether the compound proposition commands assent, not the other way around. One individual's conclusion may be another's premise; one individual's *modus ponens* may be another's *modus tollens*.[15]

Now there is certainly an attractive version of the argument that gives a kind of *epistemic* priority to the compound proposition over the atomic one. A group of decision-makers might have a common "sense" of the outcome they should come to, but still be quite unclear as to the precise reasons that properly support that result.[16] It may even be that the breach of contract

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[15] List and Pettit (2001a),  at .

[16] Kornhauser and Sager (1993), at 28 – 29, suggest that jurisprudence in a rapidly developing area, for example, the law against discrimination, might have this sort of character for judges. The space of "relevant reasons" is less settled, and there is a real danger that one might be too mechanical if one entrusted one's judgement to some given set of reasons rather than some more intuitive sense of the outcome.

example featured in Table 1 is such a case. Both judges *A* and *B* might be sure in their own minds that the defendant should not be liable for breach of contract in this case, but be uncertain as to the reasons why they feel this way. Or perhaps *A* (or *B*) is quite sure that there is no breach (no contract), but is less sure of his (her) view about the other issue. Or, finally, perhaps each judge is quite certain that the defendant should not be held liable, but is less clear that the case properly breaks down into the two issues concerning contract formation and breach.

All of these are plausible interpretations of why one might be inclined to discount the workings of the judgement aggregation function more within columns 1 or 2 than within column 3. However, these interpretations of the problem bring it closer to what appears in Table 3 than what was represented originally in Table 1. In this sort of circumstance it certainly does seem tempting to concede that the aggregation down column 3 is more decisive than the aggregation down either columns 1 or 2. But to concede this point is *not* to relax systematicity in one particular way, for example, in a way that privileges *modus tollens* rather than *modus ponens*. Rather, it is to point to the fact that systematicity really has no purchase on the problem. The level of support offered for the different propositions in 1 and 2 is simply less than the majority level of support offered for the outcome in column 3. Thus, it is not as if there was a real conflict in the aggregation of reason here, with the aggregation over premises going one way and the same sort of aggregation over conclusions going the other. It is more that there is a firm (perhaps intuitive) sense of an appropriate outcome on the one hand and the *absence* of any real reason to resist that outcome on the other. But that is precisely what we do *not* have in Table 1. There the paradox is genuine; it arises because the majority judgements of the court on each of the issues that everyone believes *do* matter do not add up (under deductive closure) to what the majority supports as the appropriate outcome in the case.

|  | (1) **Was there a contract?** | (2) **Was there conduct constituting breach?** | (3) **Was there a breach of contract?** |
|---|---|---|---|
|  |  |  |  |
| **Judge *A*** | Yes | No | No |
| **Judge *B*** | No | Yes | No |
| **Judge *C*** | Yes | Yes | Yes |
| **Majority** | **Yes** (2:1) | **Yes** (2:1) | **No** (2:1) |

**Table 3**

Moreover, there might even be something odd about letting one's prior epistemic "sense" of an appropriate outcome carry the day, even in the sort of situation that is represented by Table

3. Certainly one can imagine that there might be some difficulty pressing this approach in legal circles. Suppose, for example, that a plaintiff was injured while using some product and that she advanced two separate and independent claims for the recovery of damages from the defendant manufacturer. The plaintiff might argue that the product was either defectively manufactured (M) or sold with an inadequate warning (W).[17] Now if the plaintiff could only show that each of these claims was "true" with a 30 percent probability, then the defendant could likewise argue that there was a 70 percent probability that each of the two claims was unsupported by the facts. It seems hard to believe that it would be open to the plaintiff to say in reply: "Never mind what the reasons for my claim might *exactly* be, M *or* D. The compound probability that you do not owe me damages on at least *one* of these two claims, that is that *both* M and D are untrue, is the product of .7 multiplied by .7, that is, only 49 percent. Thus, contrary to initial appearances, I have proved my case 'more probably than not' against you!" The plaintiff's reply is inadequate because she has an obligation to frame her claim against the defendant *as an argument*, that is, under some sort of conceptual structure. It will not do for the plaintiff to show only that the defendant *probably* owes her damages *for some reason*. Instead, she must show, more probably than not, that there is *a* reason (that is, at least one particular reason) for the claim. This is also what is missing in the defendant's claim that there should be no liability in Tables 1 and 3. Perhaps Table 1 shows more pointedly that the legally relevant reasons go the other way; but Table 3 reveals the same indifference to the structural requirements of an argument.

Now, interestingly, these structural requirements do not seem to be present in the same way in Table 2 where the voting paradox is represented in propositional format. There, it will be recalled, there was identical (under systematicity and anonymity) group (majoritarian) support for proposition *p* (column1), for proposition *q* (column 2), and for proposition ~*r* (column 5). And there was unanimous (i.e., even stronger) support for the deduction that *p& q r* (column 4). Yet, the group did not offer its (majoritarian) support for proposition *r* in the way that deductive closure required. Hence, the collective irrationality. But here one is *not* in any way tempted to suggest that there is some priority in the "premises" *p* and *q* that should drive the group to the acceptance of "conclusion" *r* in the way that deductive closure on these premises seems to require. How could there be? Proposition ~*r* in column 5 seems to be just as much a "premise", or just as much an atomic proposition, as propositions *p* and *q* and, moreover, seems to enjoy exactly the same sort of group support. After all, what is at bottom here is only the preference

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[17] I borrow this example from Levmore (2001), at 729, n.11.

that each individual has over each of three possible pairwise comparisons, and this preference is just as (immediately) accessible in any one of these three columns as it is in the others. On what basis, therefore, could one possibly privilege, or give priority to, the aggregations in columns 1 and 2 and yet deny the same status to the aggregation in column 5? The difficulty is that there is not enough conceptual structure in this problem to make this sort of distinction. The systematicity condition truly does seem to apply here.[18]

So far the discussion has tended either to support the priority of atomic over compound propositions where there is this sort of structure (i.e., structure enough for an argument), or to recognize the force of systematicity (and the lack of any priority for one atomic proposition over another) where this sort of argumentative structure is absent. The third possibility, which would have us give some priority to the compound proposition over the atomic (i.e., List and Pettit's *modus tollens* position), has not yet received much support. But it is not difficult to think of a situation where this might be the best approach. However, as the following example will suggest, this is because the compound proposition that is involved is not as much a *rational* aggregation of underlying atomic propositions into some compound proposition as it is a kind of "corporate conglomerate" that only seeks a kind of single-minded guidance from a quantitative assessment of its parts. Not surprisingly, therefore, the rational structure that is provided by underlying reasons will have less of a role in these sorts of situations.

To see this, suppose that a committee of five individuals has to vote on whether it approves some three part legislative proposal "on the whole" or "on balance". To approve something "on the whole" is, roughly, to approve of more parts of the proposal than one disapproves of. Now, it is quite possible that, by majority vote, the committee might not approve the proposal as a whole, although each and every part of the proposal receives the support of a majority. Table 4 shows this possibility in familiar tabular form.

Nozick is making his argument about an individual. Transferred to a set of collective preferences, it supports at least a presumption in favour of systematicity.

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[18] Compare Nozick (1993), at 159:

The structural conditions on preferences at any one time say they must hang together in a certain way; if they do not, it is left open which ones may be revised. From the normative condition that preferences be transitive, conjoined with the premises that a person prefers $x$ to $y$ and prefers $y$ to $z$, one *cannot* derive the conclusion that she should prefer $x$ to $z$. Perhaps she should not prefer $x$ to $y$ or $y$ to $z$. The requirement that preferences be transitive should *not* be read to state that if a person prefers $x$ to $y$ and prefers $y$ to $z$, then that person should prefer $x$ to $z$. Rather, the requirement of transitivity should be read to state: it should not be the case that a person prefers $x$ to $y$, prefers $y$ to $z$, and does not prefer $x$ to $z$. From this condition, no detachable conclusion can be derived about what particular preference a person should have.

| | (1) **Was there a contract?** | | (2) **Was there conduct constituting breach?** | | (3) **Was there a breach of contract?** |
|---|---|---|---|---|---|
| | | | | | |
| **Judge *A*** | Yes | | No | | No |
| **Judge *B*** | No | | Yes | | No |
| **Judge *C*** | (1) Was there a Yes | | (2) Was there Yes | | (3) Was there a Yes |
| **Majority** | contract? Yes | | conduct constituting Yes | | breach of contract? No (2) |
| | (1) "*x > y*" | (2) "*y > z*" | (3) "breach? | (4) | (5) "*z > x*" |
| | | | | "(1)&(2)" ➜ "(3)" | |
| **Judge *A*** | Yes | | No | | No |
| ~~Judge B~~ | ~~No~~ | | ~~Yes~~ | | ~~No~~ |

**Table 4**

In this sort of situation there is at least the appearance of a discursive paradox, comparable to what we saw earlier in Table 1. The majority of committee members who disapprove of the proposal as a whole in column 4 have no reasons in common for that view. Thus, the argument might go, they would have some difficulty articulating any common understanding of what exactly it is that they are doing when they choose to reject the proposal.

All this sounds very much like the same difficulty that the majority of judges confronted in column 3 of Table 1. But is it so obviously irrational for the committee to approve each part of the proposal, but not to approve of it as a whole? It seems not. We have already recognized the idea that for any individual committee member to approve the package as a whole he or she is said to approve more of its parts than he or she disapproves. But that is only a way to give the holistic judgment some greater definition. It should not be confused with the primary idea of judging the proposal as a whole. Notice, for example, what we are not saying: we are not saying that for the individual to approve the package as a whole he or she must *vote* to approve more of its parts than he or she *votes* to disapprove. That would be to formalize too much the priority of the individual's judgements over the different parts as a way to get to the individual's judgement on the proposal as a whole. It would be to mistake what is an additive (or additively separable) *representation* of an idea for the idea itself. A judgment on the proposal as a whole is simply not a judgement that, for any individual, can be reached by a *column-by-column* vote, or one part at a time. Thus, when we discover that a majority of the committee approves each part of the proposal, we really have no reason to think (because we have not yet tested the idea) that a majority of the committee approves the proposal as a whole. Indeed, the only way that we can get

at the latter issue is by asking that question in a holistic way, that is, by asking for an aggregation down column 4 in Table 4. The aggregations that appear down columns 1, 2, and 3, and which look to be inconsistent with the aggregation down column 4, are simply irrelevant to this question.

Now it will be said that the contract paradox represented by Table 1 is exactly the same in this respect. The judges there are also being asked to settle the breach of contract question between two parties "on the whole". But, in a significant way, that is not exactly true, and the discursive paradox shows us why. For judges are unlike members of a legislative committee in that they are asked to do more than simply settle the dispute as a whole. They will settle the dispute, of course, but as judges they are also asked to settle the dispute rationally, and to provide publicly comprehensible reasons for their decision. This is why it is so problematic that there is a lack of a shared understanding in the column 3 majority of judges in that case and, further, why the court should settle that dispute on the basis of its underlying reasons rather than on some rough sense of what the case might require "on the whole". The latter approach is no more rational than the one adopted by the plaintiff, discussed above, who argued that there must be *some* reason that the defendant owes her damages even though she cannot say, more probably than not, exactly what that reason is.

### D. The Discursive Paradox as Path Dependent Choice

One of the explanations for why judges are asked to articulate their reasons for a given decision is that the decision is supposed to offer guidance for how similar cases are to be decided elsewhere or in the future. In this sense, therefore, a given legal decision is never a decision "on the whole", but only a decision as part of a whole, part of a larger rational enterprise. However, as presented so far, it is difficult to see how the discursive paradox can offer much real insight into this process since the paradox is entirely internal to one decision and, unlike the majority voting paradox, does not seem to implicate what might be rational for a series of decisions. However, a modest reconfiguration of the discursive paradox allows us to show that if a rational group of decision-makers (i.e., *not* merely a group of rational decision-makers, the sort of group we saw in Table 2) wants to be rational over time, or across different decisions, *and* have something rational to say in support of each and every decision that they make at each point in time, then the group does better to follow its reasons than, merely, its sense of an appropriate outcome.

To see this clearly, it is sufficient to present the discursive paradox in a disjunctive rather

than a conjunctive form. In our Table 1 breach of contract example, the plaintiff had to show both that there was a contract *and* that it was breached, that is, a conjunction of two independent conditions. But the discursive paradox can also arise in a case where it is enough for the plaintiff to satisfy a disjunctive requirement, viz., that either one or the other of two requirements is in place. (Indeed, the opportunistic plaintiff whom we discussed earlier, who tried to do this *probabilistically* over two different causes of action, illustrates a disjunctive version of the problem.) Suppose, for example, that a panel of three judges has to decide whether a given tribunal has jurisdiction to hear some legal dispute. There are two (and, let us say, only two) possible ways for the tribunal to take jurisdiction, *J1* and *J2*, each of which, if available on the facts of the case, is entirely sufficient to settle the jurisdictional dispute. Now suppose that Judge *A* believes that this tribunal can take jurisdiction in this case on the basis of *J1*, but not *J2*. Judge *B* believes that that the proper way for the tribunal to take jurisdiction is by way of *J2*, but not *J1*. Finally (you guessed it), Judge *C* believes that jurisdiction is not available for this tribunal under either *J1* or *J2*. Table 5 sets out this disjunctive version of the discursive paradox.

|  | (1) **Was there a contract?** | (2) **Was there conduct constituting breach?** | (3) **Was there a breach of contract?** |
|---|---|---|---|
|  |  |  |  |
| **Judge *A*** | Yes | No | No |
| **Judge *B*** | No | Yes | No |
| **Judge *C*** | Yes | Yes | Yes |
| **Majority** | **Yes (2:1)** | **Yes (2:1)** | **No (2:1)** |

**Table 5**

Again, we have what is now a familiar problem. While judges *A* and *B* form a majority in favour of finding jurisdiction *J* in column 3, they find this for conflicting reasons. Moreover, the problem, again, is not that there is no majority view on these reasons. Rather, the court does have a majority view and, as one can see from the last row in columns 1 and 2, it is that *neither J1 nor J2* are adequate reasons for this tribunal to take jurisdiction. Thus, if forced to articulate publicly their views on each of the possible routes to jurisdiction, judges *A* and *B* would have nothing in common to say.

However, the real benefit of presenting the discursive paradox in this disjunctive version is that it makes it easier to see how difficult it would be for a court to offer a set of rational decisions over time if it does anything but follow what the underlying reasons require in the compound case. For the disjunctive version allows us to separate out as three different cases each of the three legal questions that are presented in columns 1, 2, and 3. This court could, for example, be confronted, first, with the sole issue of whether *J1* is a possible way for the tribunal to take jurisdiction. Then, having decided that issue negatively on the basis of its best judgement (as represented by column 1), it might be asked in another case whether there was jurisdiction to be granted according to *J2*. Again, its best judgement would provide a negative answer to that question. But now suppose it was confronted with the compound question represented by column 3 or, what amounts to the same thing, Table 5? (If you think that this compound question is unlikely to arise given what the court has already decided on the atomic propositions in columns 1 and 2, then you have already conceded the point at issue.) Could this court rationally now support an affirmative answer on the disjunctive whole given what it has already decided on each of its component parts? List and Pettit's systematicity condition suggests, of course, that it should, but that is only to reiterate that, under that condition, there is the possibility of group irrationality here. To avoid that irrationality the court must violate systematicity and decide the compound case not only in accordance with its prior decisions, but also according to its current reasons and *modus ponens*.

Now it might be said in reply that this is a particularly favourable sequence for the reason-based result. For suppose the three cases came up in a different order, say, with the compound case represented by column 3 coming first or second in the sequence. Should that not make a difference? Could the result here not be path dependent in the same way that is suggested by the majority voting paradox? Perhaps, but then the path dependent result would feel particularly burdensome, since the final decision on the choice path would have absolutely nothing, in terms of reasons *or* desired outcomes, to support it. To see this, suppose the court did

decide the compound case first, and did so according to its column 3 sense of the right outcome. Thus, it decided that there was *J* according to the majority view. Then, if confronted with the column 1 case asking more particularly if *J1* was a reason for granting jurisdiction (note that this would be an open question since no publicly sensible reasons would be forthcoming as guidance from the previously decided compound case), it would answer in the negative. What then must it do in the third case, which asks the column 2 question about jurisdiction according to *J2*? To be rational across the different cases (rather than systematic down "like" columns in the List and Pettit sense), the court would have to accept that *J2* was now an appropriate way for the tribunal to take jurisdiction. This, after all, is what *modus tollens* demands; if (*either J1 or J2)* and ~ *J1*, then *J2* must follow. But within column 2 alone there is no ambiguity at all that the best (majority) judgement of the court is that *J2* is *not* a proper way for this tribunal to take jurisdiction and, therefore, it is hard to know how the court could rationally write reasons for that result. (Nor does a majority of the court really *want* that result, although this will be true of any relaxation of systematicity.) This is what distinguishes the *modus tollens* route to achieving rationality at the expense of systematicity. Where the *modus ponens* or reason-based route to overall rationality allows the court to at least point to its own reasons as supporting the relaxation of what systematicity (and unthinking majority voting) requires, the *modus tollens* route to coherence does not provide for the comfort of either majority preference *or* majority reason.

Further, there is some reason to believe that the *modus tollens* route to achieving overall coherence across these different cases more deeply denies the spirit of what List and Pettit hoped to achieve by way of their systematicity condition in the first place. Recall that the effect of combining the systematicity condition with the anonymity condition was that if two propositions had the same degree of support, although not perhaps from exactly the same individuals, then the group judgement on the two propositions should be the same. Now, of course, a strict adherence to systematicity is not possible under either the *modus ponens* or the *modus tollens* route to coherence; that, again, is simply what the discursive paradox exemplifies and what the List and Pettit impossibility result proves more generally. But there is a sense in which the *modus ponens* or reason-based approach to coherence is more in keeping with its underlying principle. For suppose in Table 5 that the views of Judge *A* and Judge *B* were reversed on the issue of *J1,* that is, that Judge *A* agreed with Judge *C* that there was no proper way to grant jurisdiction in these sorts of cases under either *J1* or *J2*, and that Judge *B* thought both *J1* and *J2* were proper ways to grant jurisdiction. Then, while this reversal would not change in any way *the degree of support* for either the *J1* or the *J2* cases, but only *who* gave the support, it would, nevertheless, make for a

difference in the result under the *modus tollens* approach. For now a court considering the cases in the order where the compound case came first, and the J1 case came second, (indeed, any order of the cases would do) would decide the *J2* case in the negative, exactly the opposite of the result that we observed for the *J2* case earlier under *modus tollens*. However, it is unclear exactly why this should be thought to be a sensible change in the result for the *J2* case, particularly since, at least for the *J2* question, neither the degree of support for a negative result in that case, nor the distribution of that support across the judges, has changed in any way. It is in this sense that the spirit of systematicity is not respected by *modus tollens* or the outcome-centred view. *Modus ponens*, or the reason-based view, on the other hand, delivers the same results in the three cases so long as the degree of support on the underlying reasons remains the same. In this respect, therefore, the latter approach is not only path independent in the results it achieves; it is also not arbitrarily dependent on the identity of which particular judges have which particular views across the cases.

### E. Some Concluding Remarks

In this paper I have been trying to suggest that there is more structure in the aggregation of reason than in the aggregation of preference. Group decisions based on reasons are mediated by an additional conceptual structure that is lacking in group decisions based merely on preference. This is something that a propositional interpretation of a preference framework, like List and Pettit's propositional interpretation of the majority voting paradox, cannot change, but only obscure. This additional structure means that there will often be a kind of organizational or conceptual priority for some propositions over others. This priority renders a condition like systematicity, which denies a role for any such priority, highly suspect. Also, to the extent that the notion of priority allows for the avoidance of inconsistency in propositions that would otherwise compete at the same levels, it is a notion that should help us to think through (literally) ways to avoid the shadow of Arrow-like general impossibility. For even our shared preferences are mediated by concepts and, one suspects, not all pairwise preference relations are likely to be conceptual equals. Finally, to the extent that there is structure in the aggregation of reason, it is an *underlying* or atomic structure. The priority that governs is the priority of reasons over outcomes, of premises over conclusions, and (at least where atomic and compound propositions are involved) of *modus ponens* over *modus tollens*.

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