

What Precedent Reveals About Group Agency: Evidence from Discursive Dilemmas on the U.S. Supreme Court

We regularly speak about the existence, rationality, and responsibility of many different kinds of groups within society. For example, we may think that universities have a duty to uphold academic freedom, or that a corporation can outlast its founders, or even that a particular committee or a court of law made an irrational decision.

Within social ontology and business ethics, the status of these kinds of groups is healthily discussed. Centrally at issue is the question of whether these groups genuinely do exist *distinctly* or constitute *distinctly responsible* agents (see, e.g., French 1979; Copp 2006; Pettit 2007; List and Pettit 2011; Hess 2014a; Tollefsen 2015; Collins 2023). (So, for instance, is there any sense in which a committee can be held to standards of rationality that is not merely a matter of the rationality of its members?) More broadly, there is an ongoing program within the social sciences of how to make sense of or integrate group agents (List and Spiekermann 2013; Guala 2014).

In their landmark work on the subject, Christian List and Philip Pettit built a careful and influential case for the acknowledgement of groups' autonomy from their individual members (2011). Central to this case is the much-discussed

‘discursive dilemma.’ At its heart, this involves instances in which groups making collective decisions via judgment aggregation (e.g., voting procedures) can appear to find themselves collectively endorsing things or behaving in ways not endorsed by their members, and they do this simply by virtue of following the group decision-procedures antecedently adopted.

For List and Pettit, real-world groups facing these dilemmas proceed as an agent would, namely, in a way that preserves the rationality of the group, and, consequently, bear a responsibility for their decisions that is distinctive to that of their members. Officially, List and Pettit do not pretend to show this. But although they disclaim any ambition ‘to offer a fully developed social-scientific theory of group agency, with fully worked-out theoretical models and empirical tests’ (2011, viii), it is clear that they imagine that such advances will be in the offing. Here, we present such a test.

In identifying social scientific commitments to group agency, theorists have hitherto relied either on traditional ‘armchair’ reflection (e.g., Velleman 1997) or on the findings of surveys of ordinary speakers (e.g., Phelan et al 2013). Here, we pursue the direct approach of reviewing the group act ascriptions that are indicated in the social scientific literature itself. In virtue of the exceptional transparency of its members’ attitudinal profile (Schauer 1995, 638), the group actor best placed to permit inspection of the discursive dilemma in action is the common law appellate court of law.

Equally, the cohort best placed to reveal what a court's action actually consists in are the professional specialists, namely, judges, who themselves populate such groups (and those who sit as sole members at first instance litigation). As evinced by social scientists' reliance on methods of citation analysis, judicial observation is key to understanding the behaviour of appellate courts (e.g., Landes and Posner 1976; Smithey 2001; Cross and Spriggs 2010): '[Citation analysis] enables rigorous quantitative analysis of elusive but important social phenomena... offer[ing] substantial promise of improving our knowledge of the legal system' (Posner 2000, 382, 402). The social scientific commitments we will investigate, it follows, are those exhibited in salient judicial discourse.

The choice of court, in turn, is relatively straightforward. The last few decades have seen the phenomenon of discursive dilemmas on the US Supreme Court carefully charted, theorised and debated by legal scholars. To build on existing scholarship, we therefore focus on the Supreme Court and analyse its behaviour as it is reflected in subsequent caselaw when it faces a discursive dilemma. A finding of equal precedential force for the Court's majority-supported rationales and their stated (minority-supported) premises would imply the Court's possession of a mind of its own; in contrast, a finding that its majority-supported rationales exert greater precedential force than their stated minority-supported premises would invite a majoritarian reduction to the minds of Court members.

Part I outlines the theoretical alternatives; Part II introduces the discursive dilemma. Part III reports a first empirical test of the discursive dilemma's proof of a social scientific commitment to group minds. Contrary to many theorists of

social science (e.g., Pettit 2001; Tollefsen 2002a; Copp 2006; List and Pettit 2011; Hess 2014b; Rovane 2014; Himmelreich 2017), we find that the dilemma illuminates no discontinuity between group and member attitudes but rather hints at a disparity between the rationality expected of individual agents and that expected of the majoritarian structures through which they cooperate. Judgment aggregation theory speaks to questions of institutional design, not to social ontology.

I. Individualism v. Collectivism

The challenge for theorists is to make sense of the role of group agency in social science (List and Spiekermann 2013; Guala 2014). But not all groups present the same challenge. The sort of agency that might be exercised by a group of volunteers painting a house is different to that which might be exercised by a committee, collegiate court, or large organization. The former are '[e]phemeral... groups whose identity as a group consists just in the fact that a set of persons is acting... [with a] mutual goal' (Kutz 2000, 28; similarly, Stoutland 2008, 535). In contrast, groups that 'have an identity that can survive changes of membership' seem to possess the capacity to decide, that is, to act in the face of member disagreement over mutually exclusive alternatives (List and Pettit 2011, 31; similarly, Ludwig 2017a, 5). Our focus is on the nature of decision-making groups.

It is generally acknowledged that when seeking to map the 'intuitive idea of conventional choice' (Arrow 1963, 28), the cost of an addition to the constituents of individual agency must be outweighed by the addition's role in preserving

social science. It is also generally acknowledged that introducing an order of group agency that exists *independently* of individual agency is too costly (e.g., Searle 1990). Contemporary debate instead concerns the case for positing group agents whose attitudes depend on those of individuals but which cannot readily be derived therefrom:

[I]f the group-theoretic concepts find their home as indispensable elements of the explanatory or predictive theory *T*, then we have reason to believe the group-mind thesis [that groups may form attitudes over and above those of their individual members] (Roth 2014, 139; similarly, Copp 1980, 581; List and Pettit 2011, 13-14; Tenenbaum 2015, 3379-81; Ludwig 2017b, 2-3).

If, conversely, *T* is amenable to paraphrase in terms that refer to ordinary individual attitudes alone, then our commitment to *T* does not commit us to invoking any group-theoretic concept. Accordingly, no addition to the constituents of individual agency, such as group minds, will be justified (e.g., Austin 1869, 364; Quinton 1976, 17; Ludwig 2017b). We may take it, then, that the correct theory of group agency will be that which provides the most parsimonious explanation of our social scientific commitments.

Theorists' underlying methodological agreement has not yielded substantive convergence. For individualists, "we find behind the curtains only individual agents", such that talk of the intentions of an institution should be understood only in an "analogical" sense (Ludwig 2017a, 235 237–8; similarly, Weber 1978 [1922];

Hayek 1942; Elster 1985). Conversely, collectivists recognize groups as having ‘minds of their own’ (Pettit 2003, 167; Pettit and Schweikard 2006, 36) that are irreducible to those of their members:

[T]he entities that individuals compose can assume a life of their own, deserving the attribution of discontinuous judgments and intentions (Pettit 2003, 192).¹

Then, for collectivists, there is an ongoing discussion about the extent and nature of group mentality (Weaver 1998; Tollefsen 2002b; Hess 2013, 2014b; Strohmaier 2020; Bratman 2022; Collins 2023; Corver forthcoming; *cf.* Silver 2022). However, as individualists insist, and as collectivists acknowledge, a theory of agency that eschews any recognition of a new kind of mind is potentially parsimonious:

There is no market or electorate that holds attitudes as an individual does.

To suggest that there would be to multiply entities unnecessarily, in

¹ See also List and Pettit (2011, 76). From such discontinuity, it follows that the distribution of responsibility to group members may leave a shortfall that demands an assignment of responsibility to the group itself (e.g., Copp 2006; Pettit 2007; Hess 2014a; Collins 2023). Some suggest, in turn, that the assignment to groups of responsibility may require, by extension, the assignment of a ‘wide range of rights’, both legal and moral, hitherto ascribed to individuals alone (Hindriks 2014, 1566; similarly, Sherman and Percy 2010; Hasnas 2017; Silver 2019).

violation of Occam's razor principle. Everything that needs to be accounted for is already itemized exhaustively in speaking of the dispositions and behaviour of individual investors and voters (List and Pettit 2011, 2).

Consider the contrast between markets and electorates and groups such as courts of law or expert panels. Of the latter, collectivists argue that '[t]he patterns [of group behaviour] will be elusive at the individual level as the patterns in the behavior of individuals are elusive at the neuronal' (Pettit 2014, 1655; similarly, Tollefsen 2002a, 43; List and Pettit 2011, 78). Such groups, being 'representable as agents... deserve to be cast as agents in quite a literal sense of the term' (Pettit 2014, 1647). Conversely, for the individualist, any pattern in group behaviour is retrievable from facts about individual behaviour. Once all the information on the individual level is in, then, on applying the correct rule of aggregation, all that will happen at group level will be apparent. Accordingly, granted an individualist explanation of group behaviour, there would be no more reason to think that a group agent like a court or panel holds attitudes *as an individual does* than there is to think that non-agential groups such markets or electorates do. Everything that needs to be accounted for is already derivable from the ordinary dispositions and behaviours of individual members.

Part I has outlined the two basic theoretical approaches. Part II introduces the problem of the discursive dilemma and explains how it has been thought to pose a challenge for individualism.

II. The Discursive Dilemma

A discursive dilemma arises when the rule of attitude aggregation with which the ascription of a group's attitudes generally coincides indicates a group act that does not follow from the group's reasons (List and Pettit 2011, 44-46 (drawing on Kornhauser and Sager 1986 and Chapman 1998)). Imagine a three-member group G to which the majority member attitude is generally ascribed and whose members publish their respective attitudes over *both* the group's act alternatives *and* its reasons for acting. Faced with the binary act alternatives A and B , a majority favour A . Consider the different ways in which G 's majority beliefs about the reasons for A -ing might support, not support, contradict or partially contradict G 's A -ing.

Table 1: No Dilemma

Member:	1	2	3
Reason for A -ing applies	Yes	Yes	No
Decision	A	A	B

Providing two consistent Condorcet winners, majority rule assigns to G both a decision and a justification that we may disaggregate into the attitudes of G 's individual members.

Table 2: Sharp Dilemma

Member:	1	2	3
Reason ₁ for A -ing applies	Yes	No	No
Reason ₂ for A -ing applies	No	Yes	No
Decision	A	A	B

In the classic depiction of a discursive dilemma, majority rule yields inconsistent Condorcet winners; majorities hold beliefs that conflict with the majority's conclusion. The dilemma can also take the form of logical incompleteness rather than inconsistency.

Table 3: Fuzzy Dilemma

Member:	1	2	3
Reason ₁ for A-ing applies	Yes	No	No
Reason ₂ for A-ing applies	Silent	Yes	No
Decision	A	A	B

A fuzzy discursive dilemma occurs when a majority's conclusion is not supported by any majority recognized reason. On the assumption that "if a group is to perform robustly as an agent, it must generally avoid attitudinal incompleteness..." (List and Pettit 2011, 53), the possibility that majority rule could generate a fuzzy dilemma is also potentially significant. Notice that such a dilemma is not an example of an 'incompletely theorised agreement', in which members 'agree on the result and on relatively narrow or low-level explanations for it (Sunstein 1995, 1736-37). Here, there is no explanation whatsoever on which members express their agreement.

An overlooked feature of both fuzzy and sharp dilemmas is that they can be housed within a broader web of attitudes that does retain an element of rational consistency. As we shall see, many real-world dilemmas feature an overlapping, majority-supported rationale.

Table 4: Sharp Dilemma with Overlapping Rationale

Member:	1	2	3
Reason ₁ for the application of Reason ₃ for A-ing applies	Yes	No	No
Reason ₂ for the application of Reason ₃ for A-ing applies	No	Yes	No
Reason ₃ applies	Yes	Yes	No

Decision	A	A	B
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The logical posture presented in Tables 2 and 4 is identical. Taken as a whole, the attitudes that majority rule assigns to G in the event of a sharp dilemma with majority overlap are no less incoherent than those assigned to G in the event of a sharp dilemma without overlap. The difference is that, from the more extensive web of related attitudes depicted in Table 4, a rational sub-web may be extracted. The significance of such overlap will become apparent when we set out our empirical method.

Table 5: Fuzzy Dilemma with Overlapping Rationale

Member:	1	2	3
Reason ₁ for the application of Reason ₃ for A -ing applies	Yes	No	No
Since Reason ₂ for the application of Reason ₃ for A -ing applies	Silent	Yes	No
Reason ₃ applies	Yes	Yes	No
Decision	A	A	B

For completeness, Table 5 represents the belief structure set out in Table 3 to incorporate the overlap represented in Table 4.

On supposing that, in the event of any discursive dilemma, the attitudes ascribed to *G* include Decision *A*, then the set of attitudes ascribed to *G* is either non-rational or irreducible to member attitudes. For this reason, theorists have tried to show that collectivism provides the best account of our social scientific commitments by pointing to the rationality of the attitudes whose ascription the dilemma elicits: 'Discursive dilemmas show that it is wrong to think that as a general rule group attitudes can be a majoritarian function of member attitudes' (Pettit 2007, 181).

It is standardly assumed that when individual agents 'act intentionally we act for reasons' (Mele 2003, 6; similarly, Enç 2003, 39; Stoutland 2008, 536). Thus, the 'very idea of an agent is associated with some standards of performance... which we call "standards of rationality"' (List and Pettit 2011, 24, similarly, Ludwig 2007, 357). The collectivist holds that, just as individual agency is assumed to be fundamentally rational, so too is group agency: "our practice of interpreting the actions of groups is just an extension of our practice of making sense of individuals and is governed by the same constitutive rules" (Tollefsen 2015, 104; similarly, List and Pettit 2011, 39). Specifically, a rational act is one which an agent undertakes based on a coherent set of attitudes as to its justification. In the face of a dilemma, of course, rational group action defies systematic derivation from, or reduction to, ordinary member attitudes. Consequently, on supposing that a dilemma presents no impediment to the ascription of rational group action, the collectivist concludes that group attitudes are in fact discontinuous with member attitudes, such that the former cannot readily be re-characterized as the latter:

Since the ascription of [rational] attitudes is needed to make sense of such a group's behaviour, the lack of an easy translation of group-level attitudes into individual-level ones requires us to recognize group agents... as autonomous realities (List and Pettit 2011, 5-6).

Individualism, in contrast, eschews any commitment to group rationality: '[I]t is wrong to attempt to establish a parallel between the rational individual and the rational collectivity' (Coleman 1972, 212). Rather, the web of attitudes attributed to an institution may be thin and partial:

The usual holistic [rational] constraints on attitude attribution are absent in the case of attributions to organizations... the mind of the committee... can really be quite empty except for a handful of thoughts (Ludwig 2017a, 238; see also, Gageler and Lim 2014, 547).

Since, for the individualist, a group is a mere, 'majoritarian... entity that individual dispositions might be taken to define' (Pettit 2014, 1652), a group act's relation to group attitudes as to the act's justification, and that act's consequent rationality, is contingent on the application to member attitudes of the relevant rule of aggregation, and is wholly subject to that rule's limits.

For Kirk Ludwig, for instance, there is a single event that is *A*-ing, and each of *G*'s members is an agent of it. *G*'s members each possesses an ordinary 'conditional' intention to favour *A*-ing over *B*-ing that results from *A*'s derivation from the application to members' respective preliminary intentions of a particular rule of

aggregation, i.e., that I will support *A-ing* ‘if the majority votes in favor’ (Ludwig 2007, 384; see also Miller and Makela 2005). Thus, group members’ conflicting preliminary intentions generate a consensus on how to discharge the relevant function, ‘all things considered’ (Ludwig 2015, 33), among which, the overriding consideration is to defer to a particular procedure for resolving disagreement. The set of individual member intentions thus generated commonly favour *A-ing*. The same logic can be extended to a group’s justificatory beliefs, and can thereby accommodate collective decision-making, e.g., judicial decision-making, by which *A-ing* sets a precedent for future decisions. For any group agent, breakdown remains a standing possibility, however. For the individualist, rather than proving the robustness of a group’s rationality, the emergence of a dilemma highlights the dependence of group rationality on the constraints of attitude aggregation.

The next step is to establish the sets of attitudes whose ascription dilemmas do in fact elicit, and in which our social scientific commitments consist. To this end, we consider how discursive dilemmas affect the subsequent treatment of court decisions as legal precedents.

III. The Discursive Dilemma in Action

The first rule of the [U.S.] Supreme Court is that you have to be able to count to five (Mikva 2002, 8 [quoting Associate Justice William Brennan]).

The primary institutional role of any court of law is the disposition of the parties’ litigation through ‘the entry of a judgment’ (Hartnett 1999, 126). If the emergence

of a discursive dilemma in the US Supreme Court rendered its decision a degenerate act of adjudication, then disagreement and doubt as to the identity of the winning litigant would follow. The secondary legal literature confirms that the occurrence of a discursive dilemma presents no such confusion. On each occasion that the Court has so far been said to face a dilemma, it has invariably been ascribed the judgment (to affirm or to reverse the judgment under appeal) that was majority preferred (Leonard 1984, 316; Rogers 1991, 474; Meyerson 2006, 948; Cohen 2010, 199).

In itself, of course, the ascription to the Court of a decision reveals nothing about the ascription of any inter-connected agential attitudes, that is, about whether the Court is taken to decide with or without forming a set of complete and coherent beliefs as to its decision's justification. To proceed, we must refer to an aspect of legal discourse that relates directly to the Court's *reasons* for acting. The practice of recognizing its decisions as precedents for future decisions is an obvious candidate.

Closely associated with the Western, common law tradition of adjudication, a precedent is an independent reason for reaching the same decision in analogous cases:

When we make a decision on the basis of precedent, we consider significant the fact that our current predicament has been addressed before, but we will not necessarily value a precedent for what it teaches us (Duxbury 2008, 2; similarly, Schauer 1987, 575-76; Radin 1933, 200).

Whether a subsequent case counts as analogous depends on the original court's reasons for its decision, as extracted from judges' written opinions: [A] precedent... represent[s] a decision on the balance of reasons in the individual case before the court that later courts are required to treat as correctly decided (Lamond 2006; similarly, Pigozzi 2006, 289). Accordingly, a judgment's role as a precedent 'cannot be secured if in articulating and applying the law the court itself fails to act on a complete set of reasons' (Ekins 2012, 69).² From these platitudes about the nature of precedent, we can characterize the rationality with which the Court is taken to decide its dilemma cases. Thus, if courts struggle to identify analogous subsequent cases whose resolution a decision might help determine, then it suggests that the court has failed to form views about the relevant reasons (or has perhaps formed views that dictate a contrary decision). Insofar as the decision's status as a precedent appears pathological or degenerate, we can assume that it has not in fact attracted the ascription of a rationally coherent web of attitudes. Legal scholars point to the latter scenario.

Through more or less extensive trawls of Supreme Court decisions that lack a single, majority-signed opinion, scholars have identified scores of discursive

² The same logic applies to any precedent creating collective, such as perhaps a cabinet committee or a central bank board, whose minutes/statements are later cited by subordinate bodies in the resolution of new questions.

dilemmas.³ Tracking such decisions' subsequent treatment, scholars uniformly report that dilemma cases produce 'confusing legal precedent' (Chilton and Tingley 2012, 88) that results in a 'break down' in the 'model of legalistic deference to precedent' (Hitt 2016, 60; similarly, Leonard 1984, 311; Kornhauser and Sager 1993, 43, 57; Ambro 2015, 21). Tracing the treatment of the Court's 'canonical' dilemma, *NMI v. Tidewater Transfer* (1949) (Hitt 2016, 68), David Post and Steven Salop observe how some later courts chose 'to follow the votes on the issues [reasons]' whereas others chose 'to follow the outcome of the case' (1992, 769-70).⁴ Indeed, the dilemma case of *Burnham v. Superior Court* (1990), which

³ It is possible that judges in these cases have not expressed their genuine attitudes over the applicable reasons or outcomes, such that, despite appearances, they do not in fact represent authentic dilemmas. For testing the social scientific understanding of discursive dilemmas, however, it is ultimately immaterial whether an ostensible discursive dilemma involves the expression by judges of their genuine views or not. What matters is how those cases whose perceived attributes qualify them as dilemmas are understood. Subsequent judges never substitute the original judges' expressed reasoning/votes for some other, 'true' reasoning/votes.

⁴ The normative dimension of scholarly discourse about the Supreme Court's dilemma cases mirrors its descriptive aspect. Legal experts have proposed a variety of alternative voting rules that would either avoid the possibility of inconsistent aggregate attitudes altogether (e.g., Post and Salop 1992) or minimize their frequency (e.g., Kornhauser and Sager 1993; Nash 2003). Others advocate deciding litigation in accordance with the majority intention

the Supreme Court decided unanimously, prompted Justice John Paul Stevens to suggest that “Perhaps the adage about hard cases making bad law should be revised to cover easy cases.”

However, the seeming degeneracy of dilemma decisions as precedents can tell us only so much about our willingness to ascribe rational attitudes when majority rule fails to supply them. It is plausible, for instance, that there is a correlation between the complexity of the sort of legal question that leads to judges to disagree broadly enough to generate a discursive dilemma and the complexity of identifying similar, subsequent legal questions to which to apply the resultant answer. The apparent confusion that a dilemma decision leaves in its wake might be a function, that is, not of any incoherence in its perceived reasoning, but merely of the difficulty in comparing highly nuanced situations. We need to move from wholesale analysis of the treatment of dilemma cases to a retail analysis of their individual commitments. Crucially, a more precise approach would compare the respective reception of different holdings of those decisions featuring both a dilemma and an overlapping majority rationale. Such an approach would compare the decisions’ treatment as precedents for their majority-supported reasons with their treatment as precedents for their minority-only underpinning reasons. We

notwithstanding conflicting majority attitudes over the applicable reasons (e.g., Rogers 1996). Ostensibly, this debate concerns possible reforms to majority rule that would enhance the Court’s capacity to produce non-degenerate precedents by reducing the incidence of discursive dilemmas.

derive a simple empirical implication: if discursive dilemmas force recognition of irreducible group rationality, then downstream courts should treat majority-supported holdings and their stated but majority-unsupported premises as equally authoritative.

Existing doctrinal analysis of the *Tidewater* case led us to predict that dilemma decisions would establish clearer precedents for their majority-supported reasons:

Together the Jackson and Rutledge opinions garnered five votes in favor of upholding Congress's law. So over the loud protests of the text-wielding dissenters, *Tidewater* established that a District resident can sue people from Maryland in federal court, albeit without a clear explanation of why. And that is the law to this day (Primus 2010, 102).

Part IV reports a citation analysis comparing the subsequent reception of the respective holdings of the set of US Supreme Court decisions in which a majority-supported rationale coexists with a discursive dilemma.

IV. Method

According to collectivism, groups are self-minded agents because, when discursive dilemmas occur, we treat them as if they exhibit the rationality associated with individual agency, notwithstanding the impossibility of deriving a rational set of group attitudes from members' individual attitudes. We investigate the application of this argument to legal decision-making on the US Supreme

Court. We hypothesize that the collectivist prediction is untrue; that, in fact, the Court's majority-supported rationales are assigned a significantly greater role as precedents than that assigned to the minority-supported premises from which those rationales derive.

To identify discursive dilemma decisions, we combined (i) an existing catalog with (ii) automated text patterning over public databases, followed by manual verification. Hitt 2014 reports the most systematic dilemma search to date. Analysing Supreme Court cases decided between 1946 and 2010, Hitt used a set of observable proxies recorded in Spaeth's Supreme Court Database and in Martin-Quinn Scores. Gathering all decisions featuring a) a plurality opinion and either b) a non-single peaked majority coalition over the outcome (not all members on the right of the court vote against all those on its left) or c) multiple legal issues. The resultant list of 155 decisions was then hand-coded to give a final list of 146 dilemmas. We read each of these decisions to identify dilemmas featuring a majority overlap. Five such cases were identified. To identify possible dilemma decisions that did not feature the Hitt 2014 proxies, we uploaded the set of tabular definitions featured in Part II to OpenAI o3. Applying a structural filter, in which it collected every Supreme Court opinion in CourtListener/CAP for which no opinion commanded ≥ 5 direct joiners or that contained multiple concurrences in the judgment, o3 parsed the candidate decisions to identify 24 majority-overlap dilemmas. Manual verification left a final count of 15 decisions, which included four of the five Hitt 2014 decisions, giving a consolidated total of 16. To enable the citation analysis, we created a dataset containing each decision's logical posture, outcome, majority-supported rationale, minority-only premises, and

corresponding vote tallies. (All materials available here: https://osf.io/6dp57/?view_only=791b87896ba84857b93ad7ed0e800288.)

Citations to these holdings were then extracted using CourtListener, a public database of court records. Due to their (relative) recency, citing cases for two qualifying discursive dilemma decisions, *Borden v. United States* (2021) and *June Medical Services v. Russo* (2020) had not yet been integrated into CourtListener, and were therefore excluded from the analysis, leaving a final sample of 14 cases. Each citation to these cases was subsequently stance-coded using the OpenAI's GPT-5 model (successor to o3), which was prompted to classify judicial references as positive, negative, or neutral based on the context in which the holding was cited. This automated stance-coding method follows and extends approaches in the literature on legal citation networks (e.g., Fowler and Jeon 2008; Black and Spriggs 2013), while ensuring consistency across all cases in the dataset. For each holding type, we calculated the ratio of positive to negative references. To determine whether majority-supported holdings are treated as stronger precedents, we applied paired-sample non-parametric tests to compare these metrics within cases. Thus, the dilemma propositions to be compared are drawn from the same decision, fixing issue, court, year, authorship, and doctrinal backdrop. The only systematic difference is the level of majority support.

In what follows, R-3 denotes the decision's majority-supported reason, whereas P-1 and P-2 denote the alternative minority-only holdings that needed to underpin R3. P-1 is the holding from which those judges who together announce the judgment (decision/conclusion) of the court derive R3; P-2 is the holding from

which the judges who concur in the announced judgment derive R3. With two exceptions in which they attract equal votes, P1 attracts more votes than P-2 across our cases. Accordingly, we will refer to P1 as the ‘plurality’ opinion and P2 as the ‘concurrence’.

In announcing the outcome of the case, the authors of the plurality opinion assume official spokespersonship for the Court. As such, we would expect that, insofar as later courts do in fact assign a rational basis for the majority-supported holding, it will be that supplied by the plurality opinion rather than any competing basis supplied by the concurrence:

[S]pokespersons speak for the group [agent] with the authority to dictate what the group intends... This commissive aspect of their declaration shows up in the fact that... the spokespersons cannot... claim[]... [to have] gotten the group mind wrong (Pettit 2014, 1646)

Accordingly, the key comparison will be between the precedential strength of R3 and P1.

IV. Results

We hypothesized that, as measured by the ratio of positive to negative judicial references, subsequent courts will treat the majority holding as a significantly clearer precedent than either minority-only premise. Our dataset supplies per-

case mean stance scores for each holding type across 14 cases. Because a higher mean stance implies a larger excess of positive over negative treatments, we use the mean stance as a monotone proxy for the positive:negative ratio. Stance scores are calculated from positive and negative judicial references only; neutral citations are excluded from the analysis. We test within-case differences $\Delta = R3 - \text{premise}$ using one-sided Wilcoxon signed-rank tests ($H1: R3 > \text{premise}$), report rank-biserial effect sizes, and Holm-adjust p-values across the comparisons with the plurality and concurrence holdings (R3 vs P1; R3 vs P2).

Table 6. *Summary of tests comparing R-3 to P-1 and P-2 (medians, 95% bootstrap CIs, Wilcoxon WWW and one-sided ppp, Holm-adjusted ppp, rank-biserial rrr, and sign-test counts).*

Comparison	n	npos	nneg	nzero	Mean Δ	Median Δ	95% CI (median)	W	p (R3>P)	rrb	Sign p (R3>P)	Holm p
R-3 vs P-1	14	9	3	2	0.0230	0.034	[0.000, 0.055]	62	0.039	0.590	0.073	0.039
R-3 vs P-2	14	11	2	1	0.0729	0.030	[0.007, 0.141]	79	0.009	0.736	0.011	0.017

Majority v. Plurality Holdings

Median within-case difference = +0.034 (bootstrap 95% CI [0.000, 0.055]); Wilcoxon W = 62, one-sided p = 0.036 (Holm-adjusted p = 0.036); rank-biserial r = 0.59. Sign-test counts: 9 positive, 2 ties, 3 negative (p = 0.073). Using the rank-biserial correlation, the effect size for majority rationale versus plurality premise

was $r = 0.59$, indicating $\approx 80\%$ probability that a randomly selected case has a higher R-3 score than P-1. These results indicate a modest but statistically significant advantage for the majority holding. On the core comparison between the Court's majority holding and the basis for that holding presented by those announcing the Court's decision, we find that subsequent judges treat the former as a significantly clearer precedent than the latter.

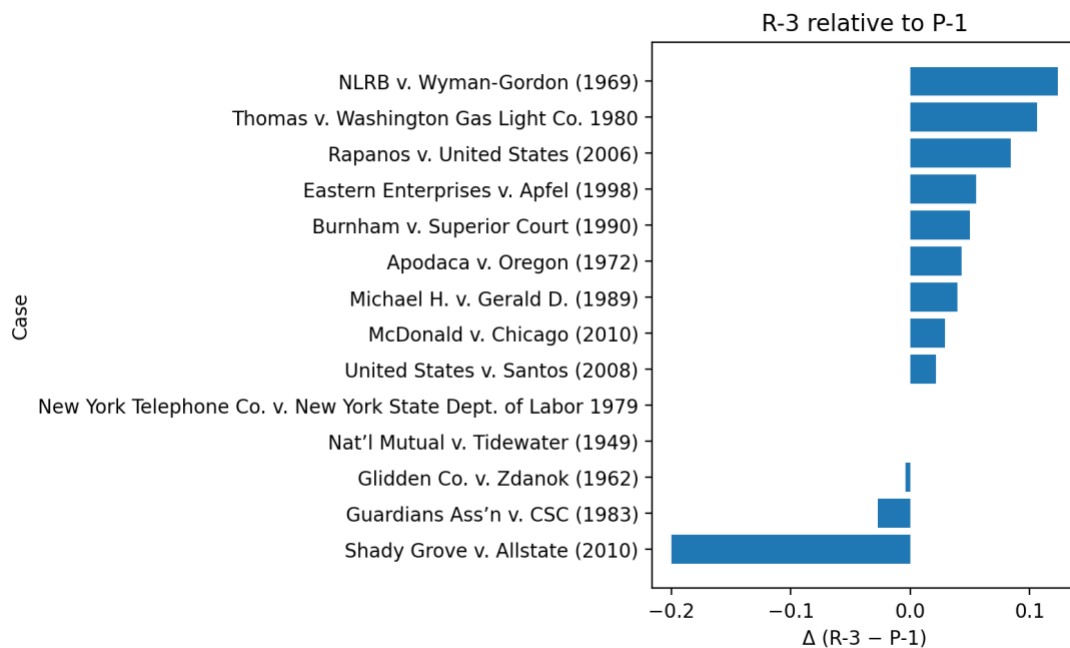


Figure 1. Bar plot of $\Delta(R3-P1)$ by case; positive bars indicate a clearer precedent for R-3 relative to P-1.

Majority v. Concurrence Holdings

Median difference = +0.030 (95% CI [0.007, 0.141]); Wilcoxon $W = 79$, one-sided $p = 0.010$ (Holm-adjusted $p = 0.019$); rank-biserial $r = 0.74$. Sign-test counts: 11 positive, 1 tie, 2 negative ($p = 0.011$). Using the rank-biserial correlation, the effect size for the majority rationale versus the concurrence premise was $r = 0.74$, indicating $\approx 87\%$ probability that a randomly selected case has a higher R-3 score

than P-2. The advantage over P-2 is therefore both statistically and practically larger than over P-1.

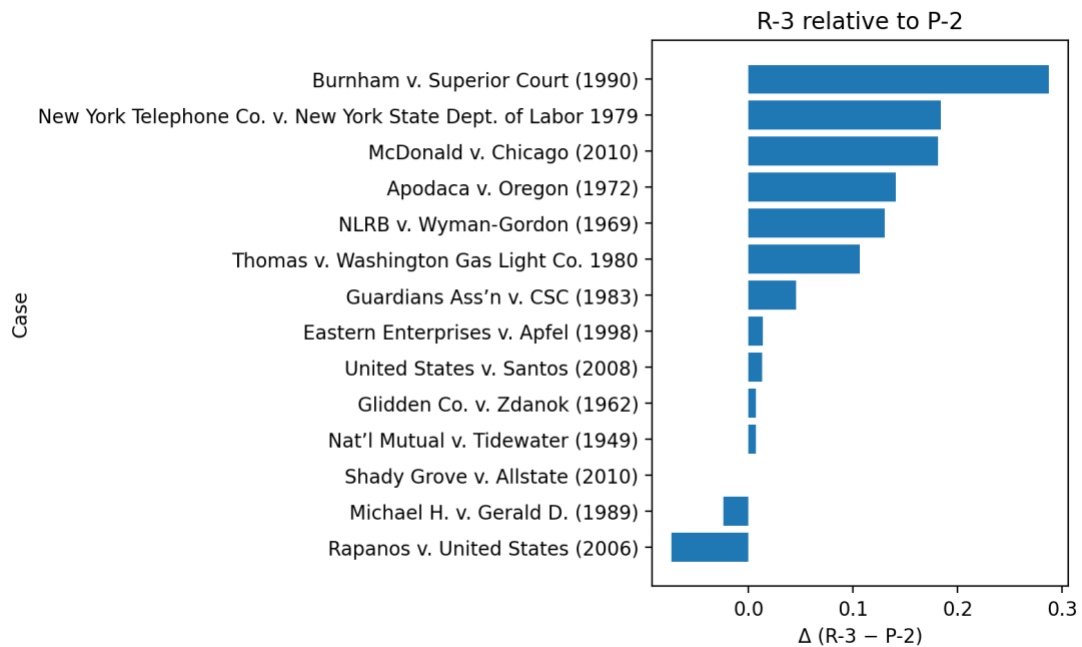


Figure 2. Bar plot of $\Delta(R3 - P2)$ by case; positive bars indicate a clearer precedent for R-3 relative to P-2.

Case-Level Patterns

The largest gains for $\Delta(R3 - P1)$ occur in *NLRB v. Wyman-Gordon* (+0.124), *Thomas v. Washington Gas Light Co.* (+0.106), *Rapanos v. United States* (+0.084), *Eastern Enterprises v. Apfel* (+0.055), *Burnham v. Superior Court* (+0.050), and *Apodaca v. Oregon* (+0.043). Deficits are concentrated in *Shady Grove v. Allstate* (−0.200) and *Guardians Ass'n v. CSC* (−0.027).

For $\Delta(R3 - P2)$, the largest gains are *Burnham* (+0.288), *New York Telephone Co. v. New York State Dept. of Labor* (+0.184), *McDonald v. Chicago* (+0.181), *Apodaca* (+0.141), *Wyman-Gordon* (+0.130), and *Thomas (Gas Light)* (+0.106). The notable deficits are *Rapanos* (−0.074) and *Michael H. v. Gerald D.* (−0.024).

Majority v. Plurality and Concurrence Holdings Jointly

We assess the joint claim that R-3 tends to exceed *both* P-1 *and* P-2 using an intersection–union procedure based on two one-sided ($R-3 > \text{premise}$) paired sign tests. As reported above, excluding ties (which carry no directional information), R-3 exceeds P-1 in 9 of 12 non-tied cases (one-sided $p = 0.073$) and exceeds P-2 in 11 of 13 non-tied cases (one-sided $p = 0.011$). The intersection–union p-value is the larger of the two component p-values, yielding $p = 0.073$. This supports the joint tendency at a 10% threshold, though not at 5%. As a robustness check, we re-score any tie as a loss for R-3 and re-run the same intersection–union analysis. Under this rule, R-3 exceeds P-1 in 9 of 14 cases (one-sided $p = 0.212$) and exceeds P-2 in 11 of 14 cases (one-sided $p = 0.029$), giving an intersection–union p-value of 0.212. The direction of the joint tendency remains the same, but the evidence weakens when ties are penalized. For comparison, we also report the joint “same-case” frequency: R-3 beats both premises in 7 of 14 cases (0.50), with a Wilson 95% confidence interval of approximately 0.27 to 0.73. Under our directional hypothesis (rate > 0.50), the one-sided binomial p-value is ≈ 0.605 , reflecting imprecision from the small sample.

A joint view places most cases in the upper-right quadrant, indicating consistent improvement of R-3 over both premises. (Three of the five dilemmas derived from Hitt 2014 are located within in the upper right quadrant: *Apodoca*, *Santos*, *NLRB*.)

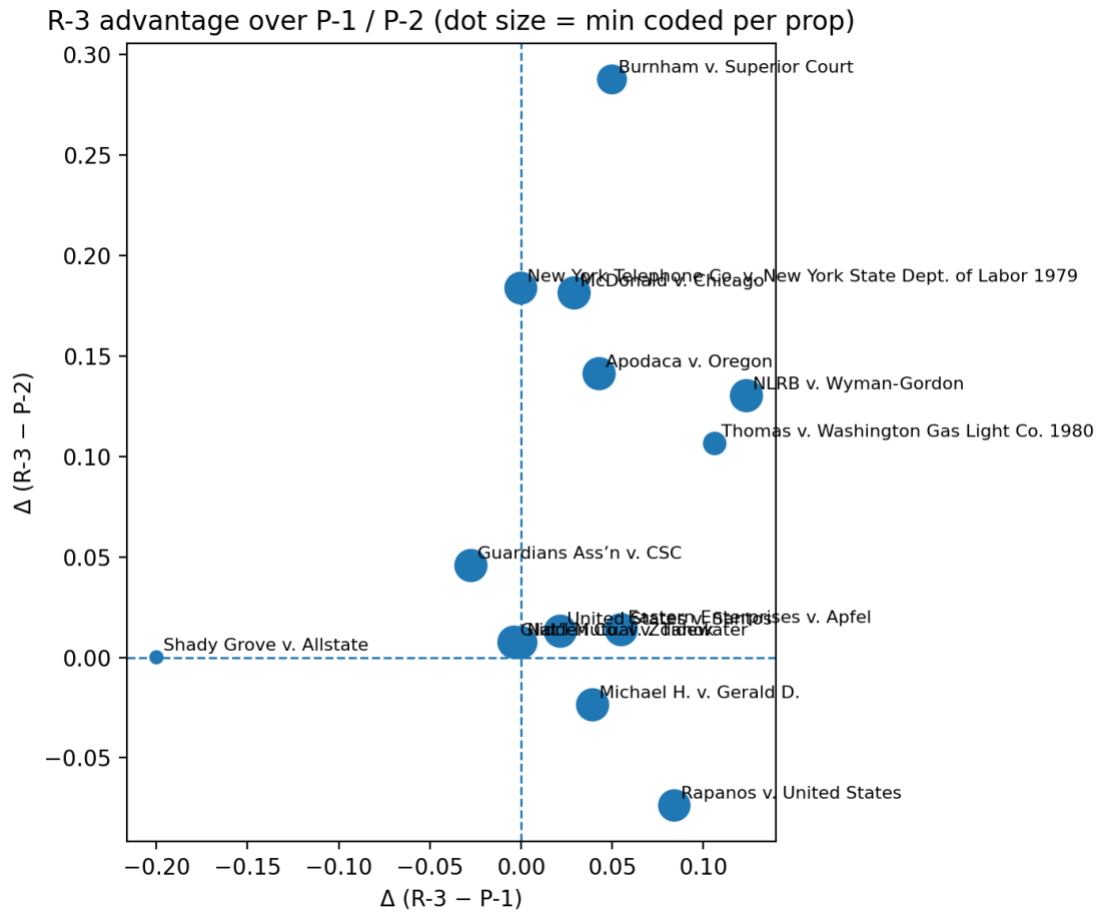


Figure 3. *Scatter of $\Delta(R3-P1)$ vs $\Delta(R3-P2)$; point size $\propto$ minimum coded observations.*

Taken together, the pairwise margins and the intersection-union tests point to a clear tendency for R-3 to outperform P-2 and a suggestive, though not conclusive, joint tendency for R-3 to outperform both premises, with the limiting factor being the weaker P-1 margin. The same-case Wilson interval reinforces this reading: the point estimate is 0.50, but plausible values range from about one quarter to three quarters with $n = 14$.

Overall, the analysis suggests that, even when it is confronted with a discursive dilemma, the Supreme Court is treated as having decided what can be traced to the majority of its members, with minority-supported holdings receiving discounted precedential weight. The Court's discursive dilemmas do not commit us to ascribing irreducible rationality to group agents; they do not 'show that it is wrong to think that as a general rule group attitudes can be a majoritarian function of member attitudes' (Pettit 2007). The implication is clear: the theory of law and courts reflects an individualistic logic, not a collectivist one.

V. Conclusion

The social scientific theories that have been thought most apt to integrate group-theoretic concepts concern the response of appellate courts to discursive dilemmas. Our study tested whether the most prominent set of discursive dilemmas, namely, those faced by the US Supreme Court, disclose a commitment to the Court's autonomous agency or, instead, reveal only the limitations of majority rule. Collectivist theories suppose that we ascribe rational sets of attitudes to the Court even when its members' majority attitudes are incoherent. If this were true, judges should ascribe the reasons supporting a dilemma decision equal precedential force, regardless of whether they commanded majority endorsement.

The results do not support the collectivist supposition. Across 14 dilemma cases, subsequent judicial treatment favors the Court's majority holdings over their minority-supported premises. Our analysis suggests that accounts of the workings

of the US Supreme Court, at least, do not in fact integrate group theoretic concepts and hence, provide no 'reason to believe the group-mind thesis' (Roth 2014). Rather than furnishing evidence for autonomous group minds, our findings cohere with the derivation of the relevant explanatory commitments from the attitudes of individual Court members. The argument that judgment aggregation results imply that we have 'little chance of tracking the dispositions of the group agent... if we conceptualize its doings at the individual level' (List and Pettit 2011, 76) is empirically undermined. Where collectivists posit discontinuity between member and group attitudes, our test points to continuity: that group-level attributions may indeed be reducible to member-level dispositions. The discursive dilemma, far from revealing the operation of self-minded groups, underlines the priority that social science assigns to individual over group rationality, and the consequent parsimony of individualistic explanation.

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