



# Do Formalist Judges Abide By Their Abstract Principles? A Two-Country Study in Adjudication

Piotr Bystranowski<sup>1</sup> · Bartosz Janik<sup>2</sup> ·  
Maciej Próchnicki<sup>3</sup> · Ivar Rodriguez Hannikainen<sup>4</sup> ·  
Guilherme da Franca Couto Fernandes de Almeida<sup>5</sup> · Noel Struchiner<sup>5</sup>

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## Abstract

Recent literature in experimental philosophy has postulated the existence of the abstract/concrete paradox (ACP): the tendency to activate inconsistent intuitions (and generate inconsistent judgment) depending on whether a problem to be analyzed is framed in abstract terms or is described as a concrete case. One recent study supports the thesis that this effect influences judicial decision-making, including decision-making by professional judges, in areas such as interpretation of constitutional principles and application of clear-cut rules. Here, following the existing literature in legal theory, we argue that the susceptibility to such an effect might depend on whether decision-makers operate in a legal system characterized by the formalist or particularist approach to legal interpretation, with formalist systems being less susceptible to the effect. To test this hypothesis, we compare the results of experimental studies on ACP run on samples from two countries differing in legal culture: Poland and Brazil. The lack of significant differences between those results (also for professional legal decision-makers) suggests that ACP is a robust effect in the legal context.

**Keywords** Experimental jurisprudence · Abstract/concrete paradox · Identifiability effect · Judicial decision-making · Formalism

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✉ Piotr Bystranowski  
piotr.bystranowski@uj.edu.pl

<sup>1</sup> Institute of Philosophy and Interdisciplinary Centre for Ethics, Jagiellonian University, Kraków, Poland

<sup>2</sup> Faculty of Law and Administration, University of Silesia, Katowice, Poland

<sup>3</sup> Faculty of Law and Administration, Jagiellonian University, Kraków, Poland

<sup>4</sup> Department of Philosophy, University of Granada, Granada, Spain

<sup>5</sup> Department of Law, Pontifical University of Rio de Janeiro, Rio de Janeiro, Brazil

## 1 Introduction

Recent work in experimental jurisprudence argues that a psychological effect termed the *abstract/concrete paradox* (ACP) may influence judicial decisions [1]. Specifically, experimental subjects, including legal professionals, endorse certain abstract principles that they tend to violate in practice—i.e. when deciding concrete cases [2]. In a series of experiments, participants tended to oppose certain judicial decisions when facing a legal problem framed in abstract terms but favored the same decisions when applied to specific cases described in detail. This difference appeared to be tied to participants' feelings of empathy in the concrete cases (but not the abstract cases), and was also observed among professional judges. Lastly, when invited to simultaneously reflect upon *both* abstract principles and their corresponding applications to concrete cases, legally-trained participants preferred to deliver consistent judgments across abstract-concrete pairs.

However, a cursory glance at the legal scholarship reveals that cultures vary widely in the extent to which they endorse or condone discretion in the application of legal rules to specific cases: Some legal traditions view *particularist* reasoning as a useful tool amidst the complexity of judicial decision-making, while *formalist* schools favor a regimented adherence to the letter of the law. As a result, formalists may view the documented disparity between abstract principles and concrete decisions as flawed in ways in which particularists do not.

We then elaborate on the two predominant strategies of legal interpretation, i.e. formalism and particularism, and suggest that jurisdictions may differ substantially in the extent to which they inculcate these approaches to judicial decision-making. Furthermore, as advanced by some of its proponents, only the formalist approach can insulate legal decision-makers from certain psychological effects, such as ACP, which jeopardize the consistency of legal reasoning. Next, we draw on evidence to suggest that Brazil, where Struchiner and colleagues' studies were conducted, evinces an exceptionally particularist legal tradition [2]. This raises the suspicion that ACP in legal contexts is a peculiarity of *particularist* cultures, and does not generalize to jurisdictions with a stronger formalist tradition. In the next section, we provide evidence that Poland is one such notably formalist jurisdiction. To corroborate our conjecture about cultural differences in the prevailing legal tradition, we develop a scale of adjudication styles and demonstrate that legal scholars (N = 133) perceive the Polish and Brazilian judiciaries as characteristically formalist and non-formalist, respectively (Study I).

Having established that countries differ in their tendency toward formalist versus particularist adjudication, we then ask the key question of our study: Does ACP arise equally in formalist legal cultures? If Polish legal professionals were to reveal substantially weaker discrepancies between their abstract and concrete judgments (than did their Brazilian counterparts), this could certify the role of formalist approaches to judicial decision-making. Specifically, such a result would lend empirical support to the claim that formalist training enables judges to override modes of intuitive legal decision-making. In the final sections, we

describe the methods and results of this comparative study (Study II). To our surprise, we found that ACP emerges equally in a formalist legal culture. That is, although the Polish legal culture encourages a literal application of legal rules and discourages inconsistency between rules and their concrete applications, these inconsistencies nevertheless emerge.

Before turning to our empirical studies, in the following section, we provide an overview of empirical research characterizing ACP, and a closely related phenomenon, the identifiability effect (IE), paying particular attention to their manifestation in judicial decision-making contexts.

## 2 The Psychology of Abstraction and Concreteness

### 2.1 The Abstract/Concrete Paradox

Walter Sinnott-Armstrong coined the term *abstract/concrete paradox* (ACP) in response to what he saw as an emerging pattern in studies by experimental philosophers: When asked philosophical questions (such as whether determinism precludes free will), participants provide strikingly different answers depending on the degree of “concreteness” with which the problem is described [1]. This, according to Sinnott-Armstrong, indicates that people have two types of intuitions, concrete and abstract, activated in different contexts [1].

Many philosophical controversies and paradoxes might be explained by the psychological conflict between these two intuitions. For instance, Nichols and Knobe showed that people experience contrasting intuitions regarding the compatibility between determinism and moral responsibility in abstract versus concrete contexts [3]: In short, people believe that agents in a deterministic universe can be held morally responsible when considering a concrete case, but not when reasoning abstractly. Convergent results have been obtained in a number of subsequent studies [4]. Some of these studies [5, 6] have been successfully replicated by Cova and colleagues in a multi-lab initiative to estimate the reproducibility of experimental philosophy [7].

The precise features of concreteness that influence respondents’ reactions are thus far poorly understood. Sinnott-Armstrong admitted that “[f]or now, the dichotomy between abstract and concrete will have to remain inspecific,” [1] while Mandelbaum and Ripley list some examples of what concreteness might amount to: describing an action that had previously been left undescribed in greater detail; considering a particular case instead of a general phenomenon; asking about an action happening in our actual world rather than an alternate, or hypothetical, universe [8].

Theories of ACP can be classified as either *affective* or *cognitive* [8]. According to affective theories, concrete descriptions often elicit strong affective reactions, both negative (e.g., moral outrage against the perpetrator) and positive (empathy towards the victim), whereas abstract vignettes are affectively neutral or mute [3, 9, 10]. On the other hand, cognitive theories argue that different types of cognitive processes are used to evaluate each case: One explanation of this kind, the *separate capacities hypothesis*, refers to episodic memory and semantic memory [1]. While

abstract cognition is processed through semantic memory, assessments of concrete behavior depend to a greater extent on episodic memory.

## 2.2 Identifiability Effect

ACP seems to be closely related to a widely-documented phenomenon in psychology and economics: the *identifiability effect* (IE), that is, the tendency for people to react more strongly (in either a generous or punitive way) to identified rather than unidentified individuals [11]. In one of the earliest experimental demonstrations of IE, inconsequential pieces of identifying information (e.g., a first name, a portrait, or even just a random ID number) consistently increased monetary donations to someone in need [12, 13]. Similar results have been obtained in the context of other types of decisions potentially benefiting third parties (e.g., in laboratory dictator games, see [14, 15]). Later studies revealed similar effects for *detrimental* outcomes involving blameworthy agents: Identifiability decreases the willingness to help, and/or increases the willingness to punish, individuals perceived as guilty of a blameworthy act [14, 16]. Thus, there is an intuitive parallel between the experimental effects of identifiability and concreteness, IE and ACP, but also two noteworthy differences which we would like to briefly highlight.

First, philosophers who have grappled with ACP have typically remained agnostic with regard to the relative normative value of abstract or concrete intuitions. Meanwhile, empirical research on IE is generally interpreted through a particular normative lens: It is often assumed that identifiability alone lacks any normative significance (but see [17–19]) and that IE yields a suboptimal allocation of resources by devaluing unidentified (or even unidentifiable) individuals [20] and/or statistical lives (e.g., preventive programs in healthcare [21]).

Another feature distinguishing the body of evidence on IE from that of ACP is the greater agreement regarding the psychological underpinnings of the effect: It is widely understood that IE is caused by affective reactions since identified individuals elicit stronger empathic reactions such as sympathy, compassion, or distress [12, 13] and also greater aversive emotions [3].

Thus, although conceptually connected, IE and ACP have been developed mostly in parallel. Nonetheless, IE is arguably a special case of ACP in which the differences between the levels of abstraction boil down to how thoroughly target individuals are identified.

## 3 Abstract/Concrete Effects in Legal Reasoning

Numerous studies have documented ACP and IE in processes of *moral* evaluation, shaping theories of moral decision-making. Given the overlap between moral and legal decision-making, one might expect that the effects of concreteness and identifiability emerge in judicial decision-making as well. After all, mounting evidence in empirical legal studies shows that professional lawyers and judges, whether in the

lab or in the field, are prone to many of the same biases that pervade laypeople's reasoning (see [22, 23]).

If ACP and IE were to play a role in the legal process, there would be arguably detrimental effects: increased discrepancies between *ex ante* and *ex post* modes of regulation (e.g., regulation through legislation and adjudication, respectively [24]), additional legal uncertainty, the possibility of inefficient legally-determined allocation of resources, to name a few. However, the breadth of evidence on this question remains limited.

In a legally relevant study often cited in the literature on ACP the goal was to elicit ordinary people's views regarding the justification of state-imposed punishment [25]. When asked in the abstract, participants appeared to take both the deterrence theory and retributivism as desirable philosophical foundations of criminal law. However, when those same participants considered a concrete case and were asked to decide on the magnitude of punishment, they turned out to be driven almost exclusively by retributive motives: Participants' punishment decisions were quite sensitive to the factors that matter according to retributivism (e.g., the seriousness of the offence, or the presence of mitigating factors) while remaining largely insensitive to the considerations that should decide punishment from the point of view of deterrence (such as the probability of apprehension, or whether the trial would be publicized and deter future crime).

The only study explicitly analyzing the role of IE in legal decision-making to date was presented by Lewinsohn-Zamir, Ritov, and Kogut [11]. Undergraduate participants were presented with a number of civil disputes and in each case were to choose one remedy from a menu of five options (ordered from the most lenient to the most onerous to the injurer). Subjects were randomly assigned to be either *policy-makers* (reading an abstract, hypothetical description of a case and deciding on remedies to be applied to future cases of this type) or *decision-makers* (reading a detailed description, including the names of the parties, of a particular case to be decided). Consistently, decision-makers chose remedies more lenient to the injurer than did policy-makers—suggesting that, in this particular context of civil disputes, IE favored the defendant. In a series of experiments conducted on professional judges, Wistrich and colleagues showed that manipulating legally irrelevant characteristics of defendants can shape empathetic responses and, in turn, affect participants' interpretation of abstract legal rules [26]. One of the experiments found that perceptions of a rule change when a case is presented as a class action (affecting a large and unidentified group of people) versus as an individual lawsuit—arguably an instance of IE. In line with the affective theories that prevail in the IE literature, the authors ascribe the effects to differences in emotional responses towards the defendants. Relatedly, Spamann and Klöhn conducted an experiment in which they asked professional judges to apply a precedent, and found that sympathy/antipathy towards the particular defendant impacted the way the law was interpreted and applied [27].

However, the most thorough study on the operation of ACP (with a strong IE component) in judicial decision-making was described by Struchiner and colleagues [2]. The authors emphasize two areas of legal reasoning that might be particularly susceptible to ACP. The first is *the application of under-determined, morally-charged legal principles* (often present in constitutional provisions), whose

interpretation regarding a particular case may be controversial. The particular example used by these authors is the constitutional principle of the protection of human dignity. At least in some contexts this principle is subject to alternative interpretations: (1) an *autonomy-based* or *libertarian* reading, according to which human dignity requires the state to respect the personal choices that citizens freely make; and (2) a *paternalistic* reading, according to which a positive ideal of human dignity may on occasion necessitate state intervention—namely, to protect citizens from self-harm. The authors hypothesized that subjects would favor the paternalistic view in concrete cases, but the libertarian view when thinking abstractly.

Struchiner and colleagues also investigated the *application of clear-cut legal rules* [2]. Unlike morally-charged principles, clear-cut legal rules can be applied almost mechanically to a vast class of cases. However, the authors hypothesized that the tendency to adopt a literal interpretation of rules would diminish in concrete cases. In particular cases, decision-makers are arguably more likely to seek a fair solution or otherwise rely on the background justification of the rule.

For each of the scenarios (some dealing with morally-charged principles and others dealing with clear-cut rules), three levels of abstraction were devised: high (a hypothetical case described in a general manner), medium (a particular case described in detail, although without any proper names, *individuation without identifiability*), and low (a particular case described in detail, including proper names of parties, their cities of origin, etc., *individuation with identifiability*). It is worth noting that the medium and low levels of abstraction differ only in legally and morally irrelevant details (e.g., proper names). Thus, the comparison between these conditions resembles the research paradigm employed in studies on IE.

Struchiner and colleagues obtained substantial support for their hypotheses: both the interpretation of the principle of human dignity and the literal application of clear-cut rules depended on the level of abstraction with which cases were described [2]. The data collected in their study are interesting for two more reasons. First, subjects were asked to complete parts of the Interpersonal Reactivity Index questionnaire, thus capturing individual differences in cognitive (perspective-taking) and affective (empathic concern) empathy [28]. Echoing previous findings, affective but not cognitive empathy predicted subjects' responses: In particular, highly empathic individuals were most susceptible to the manipulation of abstraction versus concreteness.

Second, the authors conducted their study on subjects that varied dramatically in their legal experience: from laypeople, through law students, to judges. If legal education and experience mitigate the effects of ACP and IE in legal contexts, we would expect reduced effects among legally-trained participants. To the contrary, even experienced lawyers were more *particularist* when assessing concrete cases (i.e., more likely to disregard the rule's literal formulation), in much the same way as laypeople.

Even so, one may wonder whether cultural dimensions, legal or otherwise, underlie particularist reactions to concrete cases of perceived injustice. To take one example, cultural differences in compliance with social norms and intolerance for deviant behavior [29, 30], might be associated with degrees of flexibility in the application of legal rules. In a focal study on the topic, Gelfand and colleagues used the concept

of tight cultures (cultures that enforce rigid norms and exhibit intolerance of deviant behavior) and loose cultures (with more flexible social norms and greater tolerance of deviant behavior) [29]. Those notions were subsequently operationalized and examined in a cross-cultural study involving 33 countries, including Poland and Brazil. As a higher score on the tightness scale suggests a society is characterized by strong adherence to social norms, it stands to reason that such a society might also favor the literal and steadfast application of legal rules (implying also a lower propensity to ACP in legal decision-making). Gelfand and colleagues' study found Brazil to be on the lower end of the tightness dimension [29]. If ACP effects arise from this general flexibility toward rules, we would expect them to be comparably weaker among nations higher in tightness.

Alternately, these effects may emerge from the predominant approaches to legal adjudication. In particular, Brazilian legal culture is largely influenced by the neo-constitutionalist philosophy of legal interpretation—a philosophy that emphasizes a particularist application of law, and relies heavily on constitutional principles and fundamental rights as articulated in the natural law tradition [31].

Thus, our study sought to assess whether the results obtained by Struchiner and colleagues replicate in a formalist legal culture with a strong preference for the literal interpretation of legal provisions—namely, Poland [2]. In the following section, we describe formalism as a philosophy of adjudication and elaborate on the Polish and Brazilian legal cultures.

## 4 Judicial Formalism and Legal Culture

### 4.1 Particularist Brazil

Judicial decision-making in Brazil is markedly particularist, as evidenced by existing legal scholarship, as well as by the public record on the beliefs and attitudes of Brazilian judges. Since the adoption of Brazil's current Constitution in 1988, scholarly discourse has overtly advocated the adoption of morally charged decision-making methods in law. For example, Bodin de Moraes argues that:

The inclusion of fundamental rights and of the protection of human dignity in positive law, present in these constitutional texts [articles of the 1988 Brazilian Constitution], however, only became decisively significant after the neuralgic foundations of the contemporary legal paradigm was changed, i.e., after the normative force of the Constitution was recognized. The legal system's opening is recognized, in this way, inside positive law itself, for in its dynamic it allows, through the interpretative process, the resource—always argumentative—to (moral) values [32].

This is but one instance of the influential academic movement which defends the idea that even the traditionally more formalist disciplines regulated by the Civil Code should be interpreted through the morally loaded lens of the Constitution. The movement's discourse is openly anti-formalist, favoring an all-things-considered resolution of each specific case over a literal interpretation of the rule's text. In the

words of a critical observer, it was “undeniably a successful movement [...]. [T]he influence of private constitutional discourse is increasingly noted on Brazil’s doctrine and case law since its introduction in the academic scene over twenty years ago” [33].

A testament to the movement’s success is the degree of particularism present in rulings and legal opinions issued by Brazil’s top judges. Take for instance Justice Luiz Fux, a Supreme Federal Court (SFC) justice. Before being appointed to SFC, Justice Fux was a member of Brazil’s second highest court, Superior Court of Justice, where he became famous for delivering morally loaded opinions. In one case where he decided to bypass the text of a local rule restricting publicly-funded treatment options for a rare disease, Justice Fux justified his choice in the following terms:

I am a persevering defender of human dignity, of the values immanent to human life and hope. I believe that’s our daily task as judges (...) and in doubt, we must side with this citizen’s hope to be cured at a more advanced [medical] center. [...] once again, whenever torn between the dictates of the law and the demands of justice, I’ll opt for the solution that I consider to be more just.<sup>1</sup>

Fux was not reproached by the legal community for his disregard for the text of the most applicable rule, but rather praised for it, ultimately getting promoted to the highest court in Brazil. He has not changed his mind either. In 2016, in interview to a project documenting the history of STF, justice Fux said the following regarding judicial decision-making:

Today’s Constitution [...] purports to indicate that all activities pursued by the State’s powers must be ethical, moral. Thus, all of this does not only guide those who act on the legal arena, but also those who apply the law. Legal decision-makers will render a decision and will have to make it as close as they can to the demands of ethics and legitimacy. I am used to saying the following: Justice is not something you learn, justice is something you feel. We know what is fair and what is not fair [34].

Moreover, Fux’s approach to legal interpretation is representative of many, if not most, of his colleagues on the bench. For example, Luis Roberto Barroso, another justice at STF, has a similar trajectory of anti-formalism [35]. For some of the most famous instances of particularistic decision-making in the Brazilian Supreme Court, see ADO 26, ADPF 132 (where Barroso was still a lawyer arguing the case before the court), AP 937.

Evidence from some academic articles and explicit attitudes of justices sitting on the country’s most important courts offers anecdotal support for our claim regarding Brazilian legal culture. However, a recent survey of a nation-wide sample of professional judges provides some more systematic evidence of Brazilian particularism [36]. Parts of the study shed light on judges’ views about legal decision-making. For

<sup>1</sup> MS 8895 DF 2003/0014265–0.



instance, 57.9% of first-instance judges (N=2519) and 44.8% of appellate judges (N=313) disagreed with the statement that “The judge should prioritize the text of statutes over constitutional principles”, clearly expressing a preference for standards over rules. In a similar vein, 51.8% of first-instance judges (N=2763) and 51.3% of appellate judges (N=357) expressed that they should be able to disregard Supreme Court precedents. Finally, 89.4% of first-instance judges (N=2519) and 91% of appellate judges (N=313) agreed that judges can use constitutional principles to compel other powers to act on matters of public health, education and security.

Those results show that the wide population of Brazilian judges has followed the legal academia and top justices in their particularist philosophy. Brazilian academics and judges are forthcoming in their distrust of formalism and their praise for the use of morality in legal decision-making. Moreover, it is plausible that this overall stance might be relevant in contextualizing the effects of cognitive biases in Brazilian legal decision-making.

## 4.2 Formalism as a Judicial Interpretive Strategy

Formalism provides an alternative to particularism in legal adjudication. As characterized in one of the definitions offered by Frederick Schauer, formalism “is the practice (...) of following (...) the plain meaning of the words of the document in the face of plausible arguments for doing otherwise” [37]. This definition emphasizes two constitutive elements of formalism as a judicial interpretive strategy, both of them often stressed in the legal literature, that is, its reliance on the text of relevant law (textualism) and the minimization of extralegal sources of law in the process [38]. Those two elements combined imply that, for a formalist, deciding a particular case on the basis of literal application of a relevant legal rule (at least as long as it communicates plain meaning) is preferable to considering any wider range of factors [38]. As a result, formalism focuses on the locally applicable rules (most narrowly pertaining to the given situation) as a basis of adjudication (Although systemic interpretation of legal texts is also formalist, it should only play a secondary role [38]). In other words, formalism is assumed to drastically limit the set of factors relevant to deciding a particular case, excluding from consideration (or at least decreasing the relevance of) factors that might be deemed legitimate and relevant under other normative theories of adjudication. Among those other factors, most notable are the objective (background justification, rationale) of a given rule. Another group of possible factors would include general principles to be directly applied to the case at hand: general legal or constitutional principles, values derived from political ideology, religion, morality, the idea of justice or efficiency, etc.

What is the reason behind defining the catalogue of legitimate reasons for judicial decisions in such a restrictive way as postulated by formalism? Even the most ardent proponents of formalism do not claim that there is something in the nature of law that requires this interpretative strategy to be the preferred tool in adjudication [37]. Quite the opposite, formalism is typically defended as a framework necessary to limit judicial discretion and in this way facilitating values such as rule of law, legal legitimacy, and predictability of law [39].

However, as Sunstein once noticed, a more pragmatic approach to the choice between judicial interpretative strategies could be preferable, one that focuses on empirical claims about the performance of (non-ideal) legal actors [40]. Under such an approach, formalism with its limited set of legitimate legal reasons would be better than other interpretative strategies if it led to smaller social costs resulting from decision costs and error costs generated by imperfect decision-makers. This line of argumentation has been long present in the work of formalism's most prominent defender, Frederick Schauer. He argues that the extremely non-formalist approach to legal interpretation, one that takes all possibly relevant factors into consideration while deciding every particular case, could lead to first-best solutions, socially optimal rulings in every case [41]. However, such a first-best outcome would be achievable only in a world populated by ideally rational judges with unlimited computational resources. In our world, non-formalist judges, trying to take into account a large number of factors, are more likely to err, thus generating costs that can outweigh the benefits of avoiding over- and under-inclusion, a typical problem resulting from formalism. In other words, formalism, by reducing the number of considerations to be taken into account, makes a complicated decision much more tractable for the imperfect judge, thus limiting the costs of decision errors. Under some conditions, formalism can be the best tool to achieve second-best judicial decisions in our imperfect world.

What kind of errors may be made by non-formalist judges wanting to take an unlimited set of factors into consideration? The most obvious answer, provided by Schauer, is errors stemming from the incapacity of the human mind to deal with decision-making based on too many factors. In line with this, it has been suggested that judges deciding cases in a non-formalist mode may be more susceptible to multiple kinds of biases, such as cognitive biases known from research in cognitive psychology [42, 43]. Here, another instance of psychological effects that might affect judicial decision-making is ACP, as described earlier. As it was noted, the tendency to make different decisions depending on the level of abstraction to which a moral/legal problem was presented, may be explained by the differing impact of subjects' affective empathy on their decision-making process. If so, formalist judges, who are expected to deliver their rulings independently of any extratextual factors (including their feelings of empathy), might be expected to produce less inconsistent judgments by being less susceptible to ACP.

### 4.3 Formalist Poland

The style of judicial reasoning in Poland, like in other Central and Eastern European (CEE) countries, is still largely determined by its Communist history. Even though the constitutional reforms in CEE countries after the fall of Communism in 1989 and the subsequent accession of most of these countries to the European Union resulted in a fundamental legal change, there are still many remnants of the former system present in their legal culture and in judicial practice. Formalist thinking about law and its application is one of them. It was present in legal education and courtroom practice in Poland during the period of real socialism, and still is the

dominating way of thinking about law in academia as well as in legal doctrine and practice. Every instance of judicial activism is considered highly controversial [44].

Historical reasons for adapting formalism as judicial ideology were paradoxically twofold: on the one hand, it was acquiescent with the predominant Marxist-Leninist theory of law, but, at the same time, strictly following the letter of the law was also a way for judges to mitigate the influence of the official state ideology on actual rulings [45, 46]. To be more precise, the ideology of socialist normativism, which, starting from the last 1930s, was the official judicial ideology in the Soviet Union (and, subsequently, in its satellite states in the post-Stalinist era) and was characterized by “a rigid statist conception of law and formalist theory of adjudication” [47]. This kind of legal philosophy and practice has been described as “hyperpositivism”, or, as a reference to a term coined by Pound, “mechanical jurisprudence” [45, 48, 49]. It is widely accepted in the literature that the remarkable judicial formalism in CEE countries in general (and in Poland in particular) is a characteristic feature, differing these countries from other Continental legal systems and making them “the last bastion of formalism” [48, 50, 51]. The dominating opinion in the literature is that such a judicial strategy leaves judges unprepared for the new reality, in which they are expected to interpret even clear legal rules in light of constitutional principles and EU law [46]. What are the key symptoms indicating the strength of formalist thinking in Polish jurisprudence?

Firstly, the Polish Constitution of 1997 provides a closed catalogue of sources of law, which is commonly understood as limiting law to statutory regulations. Although the impact of precedents and legal doctrine is very significant, it does not count as law *per se* and it hardly ever leads to rulings inconsistent with the linguistic interpretation of the applicable statutory rule.

Secondly, regarding the issue of judicial ideology, that is, what is the role of the judge in legal proceedings, it is widely accepted that the role of judge is rather restricted, especially concerning lower-tier courts. As noted by Rafał Mańko, the preferable way to solve a case in Polish courts is to focus on the procedural and formal issues—if it is possible to dismiss a case on formal grounds, the court would not go to the substance of the matter [45]. This can be explained both by the tendency for judges to reduce their effort as well as to minimize the risk of overruling by the higher-instance court [52]. This tendency of Polish judges to employ formalism as a tool to reduce their workload, often labelled “escape into formalism”, can be further explained by the fact that the explosion of caseload in the post-Communist transition period was not immediately accompanied by providing courts with additional staff and resources [46, 53]. Another factor contributing to the prevalence of formalism in a legal culture is its central role in the process of legal education, both in law schools and during the training of prospective judges [53]. Students are taught mostly about the law applicable at the time, with little attention to its background justification or to its critical analysis, which would show the underlying moral and political values [39]. Furthermore, there is a relatively marginal focus in legal education on teaching the practice of argumentation and reasoning [45, 46].

Thirdly, one of the crucial, widely discussed issues in Polish legal theory is the role and methods of legal interpretation. Although these issues are subject to numerous controversies in Polish legal academia, most authors agree that the linguistic

canon of interpretation enjoys lexical priority, and other canons of interpretation are ancillary, being called out only when the result of linguistic interpretation provides ambiguity or is obviously absurd [54, 55]. The same conclusion follows from case law of Polish courts. For example, the ruling of Polish Constitutional Tribunal from 28.06.2000 stated the priority of linguistic interpretation regarding the interpretation of constitutional provisions concerning the sources of law. The Polish Constitution of 1997 provides an enumerative catalogue limiting the sources of binding law to acts of Parliament, international agreements, and statutorily authorized governmental regulations, as well as acts issued by administrative organs in their statutory discretion (see Article 87 of the Polish Constitution of 1997). In the cited ruling, the Constitutional Tribunal decided that no official document that is not explicitly listed in the Constitution can count as a source of law in the Republic of Poland. The same ruling provided, however, some strict criteria allowing for the possibility of using other kinds of statutory interpretation, i.e., functional interpretation [56]. Moreover, referring to extratextual legal standards, such as constitutional principles, is still quite rare in legal opinions. Stawecki and colleagues note that this happens despite the direct applicability of constitutional provisions (see Article 8.2 of the Polish Constitution of 1997) [57].

Despite the near-universal consensus in the theoretical literature on formalism as a distinctive feature of the Polish and other CEE legal systems, some authors point out that appropriate empirical research is needed to corroborate this thesis [47]. Fortunately, some empirical data in this regard is already available.

Studies by Matczak, Bencze, and Kühn appear to be the only attempt to date at assessing the pervasiveness of formalist judicial strategies in CEE countries by empirically analyzing actual court decisions [46]. It should be noted that there also exists survey research indicating that Polish judges themselves openly express their preference for the formalist judicial strategy. For example, in a study by Patecki, a majority of surveyed Polish judges pointed to the linguistic canon of legal interpretation as their preferred one [52]. A systematic, although purely qualitative and slightly dated, comparison of judicial strategies in different jurisdictions, indicating a relatively large level of formalism in the Polish judiciary, can be found in a paper by Wróblewski [54].

Matczak and his colleagues examined a set of rulings issued by supreme administrative courts in the Czech Republic, Hungary, and Poland and assessed the relative frequency with which judges based their judgments on references to four classes of “standards”, as defined by the authors [46]. These “standards” were: (i) standards internal to law (linguistic interpretation, systemic interpretation, rational law-maker assumption, references to previous decisions; this class encompasses typical instances of the formalist strategy, according to the authors), (ii) standards external to law (compliance with the legislature’s intention, the social objective or purpose of a law, preventive function of a law), (iii) constitutional standards (such as proportionality principle, freedom of business, protection of private property, or anti-discrimination principles), and (iv) standards originating from the European Union law (EU directives, EU legal principles, such as the fundamental freedoms, as well as the CJEU case law). In their first study, analyzing judgments from 1999–2004, i.e., from the period directly preceding the subject countries’ accession to the EU,

Matczak and his colleagues found that the overwhelming majority of references in their sample of rulings was to the class of standards internal to law, the typically formalist arguments [46]. For example, in Poland, over 81% of analyzed references were to internal standards, around 10% to external standards, 7% to constitutional standards, while the number of references to EU standards were negligible. The second study by Kühn, Matczak and Bencze analyzed a set composed of rulings issued in the period following the subject countries' accession to the EU (2005–2013), this time drawing a slightly more complicated picture [53]. To again focus on Poland, the relative frequency of references to internal standards decreased by almost 7 p.p., when compared to the previous period. This could be largely attributed to the increase in references to EU standards, which now accounted for 5% of all references. On the other hand, almost no change was recorded with regard to references to constitutional and external standards (which would have been more indicative of an actual decrease in formalism; the dynamic was quite similar in CZ and HU). All in all, the authors' conclusion that the EU accession triggered a substantial decrease in judicial formalism in CEE countries seems a bit premature: while it indeed looks that the accession forced CEE judges to directly apply principles of EU law, this change was not accompanied by a greater willingness to employ more typical non-formalist interpretative tools. The picture emerging from the authors' second study presents CEE judges almost 10 years after EU 2004 eastward enlargement as still being staunch formalists. One noteworthy tendency visible in both studies by Matczak and his colleagues is that while Poland was consistently a bit less formalist than Hungary, both countries remained definitely more formalist than the Czech Republic [46]. The authors explain this Czech exceptionalism by the fact that, throughout the transition period, the Czech Constitutional Court had explicitly provided common courts with motivation to directly apply constitutional principles and other extratextual factors to cases at hand. This element of effective motivation provided by the Constitutional Tribunal was missing in Poland, as noted by Stawecki and colleagues [57]. Even though the Polish Constitution of 1997 contains an explicit presumption of direct applicability of its provisions, it has not really become a part of Polish judicial practice to make use of this opportunity.

It would seem that at least the Polish Constitutional Court would be less formalist, since by its nature it rules on the constitutionality of statutory acts on the basis of constitutional principles. However, a study by Stawecki and colleagues indicates otherwise [57]. These authors analyzed a random sample of rulings of the Polish Constitutional Tribunal finding that the modes of interpretation used most frequently in the rulings were systemic and linguistic interpretation (30–50%, depending on the interpretation of the comparative method). Similar conclusion was drawn from the analysis of the rulings of the administrative courts, corroborating the results obtained by Matczak and his colleagues [46]. The authors reach this conclusion from the fact that in administrative rulings practically no references to policies apart from the rule-based adjudication are made, and they interpret this as a clear sign of a highly formalist approach.

In sum, while judges in Brazil are celebrated and promoted for deviating from legal materials, in Poland any departure from a literal interpretation is unusual

and typically frowned upon. In other words, the Polish legal culture is decisively formalist while Brazilian lawyers are more particularist.

## 5 Study I—Perceived Judicial Formalism

The preceding section reviewed a wide legal literature, as well as fragmentary empirical research, suggesting that the Polish judicial system is exceptionally formalist while the Brazilian one is exceptionally particularist. In the present section, we evaluate this hypothesis of cultural variation in adjudication style by measuring differences in formalism and particularism across these two jurisdictions using a common instrument. However, since no such tool, to the best of our knowledge, has been presented so far, it is something we had to develop from scratch.

One direct approach would be to analyze the content of judicial opinions; although this qualitative approach may be confounded by other cultural and linguistic differences (such as the length or style of judicial opinions). Hence, it is hard to ensure that such naturalistic comparisons across cultures are valid.

Instead, we measured the degree of formalism through a single, novel psychometric instrument that relies on expert perceptions of the predominant adjudication style. The expert population whose perceptions we focus on are law graduates affiliated with a law school. There are a number of reasons to believe that law professors are the group most likely to have an accurate vision of the style in which judges decide cases. First of all, the core of work of most legal academics is studying the argumentation used in a wide range of judicial rulings. Second, the perception of law professors, unlike that of judges or practicing lawyers, is relatively less likely to be biased by professional loyalties or personal involvement in the legal process. Finally, it seems that law academics can be expected to have at least superficial familiarity with foreign legal systems, thus they might appreciate those features of their domestic legal order that are actually distinctive.

We intended to measure the perception of the style of judicial decision-making using a scale that we developed largely tracking the protocol formulated by Hinkin [58]. Our choice of items was fully guided by the analysis of the relevant literature. First, following the most notable definition of formalism [38, 41] we ask whether judges decide cases in accordance with the literal meaning of the applicable rule even when they personally disagree with the result. Second, we follow the arguments that formalist decision-making might be driven by the aspiration to secure consistency and predictability of law [41]. Accordingly, we ask whether judges decide cases in a way intended to secure those two values. Third, many authors claim that formalism can be a safe strategy for reversal-averse judges, since judicial decisions consistent with the literal meaning of the applicable rule are less likely to be reversed by a higher-instance court [52]. Accordingly, we ask whether judges expect that their rulings inconsistent with literal meaning face an increased risk of being reversed by a higher instance. Finally, many authors suggest that judicial formalism implies that there is less need to engage in first-order moral reasoning while deciding legal cases [41, 59]. Hence, we ask whether judges tend to write their opinions in legal, rather than moral, terms.

Then, we also generated some reverse-coded items (in which an affirmative answer indicates greater particularism). Here, we follow the literature in constructing particularist judges as aspiring to realize the underlying goal of a given rule when applying it [60], always wanting to deliver justice to the parties to a given legal dispute, even at the expense of other legal values, grounding their legal opinions in fundamental constitutional principles even when it is not necessary [31]. Furthermore, we speculate that judicial particularism might be motivated by public opinion's aversion to rulings that seemingly fail to do justice. Accordingly, we ask whether judges face criticism when they privilege applying the rules over doing justice.

| Item   | Factor loadings |        | $\alpha$ if item dropped |
|--|-----------------|--------|--------------------------|
|  | F1              | F2     |                          |
| Formalism (Cronbach's $\alpha=0.76$ )  |                 |        |                          |
| When possible, judges decide cases on the basis of the literal meaning of the applicable rule, even if they do not personally agree with the rule-generated result | 0.919           |        | 0.62                     |
| Judges decide cases in a way that aims at ensuring the consistency and predictability of law   | 0.576           | -0.352 | 0.72                     |
| Judges expect to be over-ruled by a higher instance when they depart from what the literal meaning of the applicable rule mandates                                 | 0.583           |        | 0.73                     |
| Judges try hard to draft their opinions in legal, rather than moralistic, terms  | 0.563           |        | 0.73                     |
| Particularism <sup>a</sup> (Cronbach's $\alpha=0.57$ ) <sup>b</sup>  |                 |        |                          |
| Judges decide cases in a way that facilitates achieving the purpose of applicable law  | -0.210          | 0.707  | 0.55                     |
| When deciding a case, judges aspire to do justice to the parties even at the expense of other legal values   | 0.327           | 0.439  | 0.51                     |
| Judges are criticized when they privilege applying the rules over doing justice  | -0.318          | 0.213  | -                        |
| Even when it is unnecessary, judges aspire to ground their rulings in fundamental constitutional principles  | 0.300           | 0.604  | 0.31                     |

<sup>a</sup>All items reverse-scored.

<sup>b</sup>Reliability after the third item dropped.

Before reading the items (translated into Polish and Portuguese, respectively), participants were asked to think about how judges in different jurisdictions decide cases and how Polish (/Brazilian) judges decide cases. Then, for each of the items, participants were asked to decide whether the statement accurately describes the behavior of typical Polish (/Brazilian) judges, when compared to the average foreign judge (on a 7-point Likert scale<sup>2</sup>).

<sup>2</sup> A *Likert scale* is a survey tool which measures the strength of a participant's beliefs or attitudes by asking them to provide a numeric value that represents this strength (see [70]).

## 5.1 Participants

In total, we recruited 133 law graduates ( $N_{\text{Poland}}=63$ ;  $N_{\text{Brazil}}=70$ ) for this study. Polish participants (mean age=41.5 years, 27 women) were recruited via faculty mailing lists at 8 high-tier Polish law schools. Brazilian participants (mean age=46 years, 27 women) were recruited via a mailing list of peer reviewers for a prestigious law journal. In both jurisdictions, we managed to recruit samples overwhelmingly consisting of subjects with experience working in legal academia (although many participants also reported other kinds of professional experience). These professional categories were non-mutually-exclusive: in Brazil, 61 participants were law professors, 48 were attorneys, and 3 were judges; in Poland, 54 were law professors, 36 were attorneys, and 13 were judges.

## 5.2 Factor Analysis

An exploratory factor analysis was conducted using a minimum residual factor analysis with an oblimin rotation.<sup>3</sup> Applying the Kaiser criterion [61], and examining the scree plot [62] we concluded that our scale was composed of two factors. The two-factor solution shows that all items but one loaded significantly on either of two factors that can be described as ‘formalism’ and ‘particularism’ dimensions—in line with our a priori classification. The only exception was the item “Judges are criticized when they privilege applying the rules over doing justice” whose load on either item did not exceed 0.40, which provided us with a sufficient reason to delete this item [63].

This way, we ended up with three items in the particularism dimension and four items in the formalism dimension. The inter-factor correlation is equal to 0.02. Finally, we assessed the internal consistency<sup>4</sup> of both scales. Cronbach’s  $\alpha$  [64] for the formalism dimension is equal to 0.76, indicating fair reliability; Cronbach’s  $\alpha$  for the particularism dimension is equal to 0.57, which implies that it is unreliable.

<sup>3</sup> As a typical survey measures a number of distinct latent traits in the target population, an *exploratory factor analysis* aims at combining questionnaire items into *factors*—observed measures of those latent traits. The optimal number of factors depends both on the underlying theory and on the application of some possible quantitative analyses, such as the *Kaiser criterion* or *scree plot* methods. Having established the number of factors, factor analysis determines the extent to which each questionnaire item ‘loads’ on each factor, allowing to associate a given item to the factor to which it provides the greatest load. In the present context, we employed a factor analysis with *oblimin rotation*, which allows factors to be non-orthogonal, that is, it allows for some level of correlation between factors. See [58].

<sup>4</sup> *Internal consistency* refers to the degree of covariance between different items of the same measure. Good internal consistency indicates that the measure is reliable. Cronbach’s  $\alpha$  is a measure of internal consistency based on pairwise correlations between items and it can take values between 0 and 1. Cronbach’s  $\alpha$  of .7 is considered the minimum to consider a given measure reliable. See [58].



### 5.3 Cross-Country Comparison

Here we report a series of one-sample *t*-tests against the scale midpoint. Since the scale midpoint was labeled “[Polish/Brazilian judges behave this way] as frequently as foreign judges”, a significant difference from the midpoint indicates that a given judicial system is perceived as below or above average in either formalism or particularism.

As for the formalism scale, Brazilian judges were seen as significantly *less* formalist than foreign judges ( $M=3.00$ ,  $t(69)=-7.10$ ,  $p<0.001$ , Cohen’s  $d=0.85$ ), while Polish judges as significantly *more* formalist than foreign judges ( $M=4.67$ ,  $t(66)=7.16$ ,  $p<0.001$ , Cohen’s  $d=0.87$ ).<sup>5</sup>

Turning to the (unreliable) particularism scale, both in Brazil and in Poland judges were seen as below average on particularism (Brazil:  $M=3.64$ ,  $t(69)=-2.29$ ,  $p=0.012$ , Cohen’s  $d=0.27$ ; Poland:  $M=3.17$ ,  $t(66)=-7.42$ ,  $p<0.001$ , Cohen’s  $d=0.91$ ). Still, Brazilian judges were perceived as significantly more particularistic than Polish judges ( $t(123.2)=2.42$ ,  $p=0.02$ , Cohen’s  $d=0.41$ )—in partial support of our prediction.

### 5.4 Discussion

To corroborate our assumption that the Brazilian and Polish judiciaries are located on the opposite ends of the formalism/particularism spectrum, we conducted a study measuring legal experts’ (law professors’) informant ratings of judges’ behavior, specifically, with regard to the predominance of formalism versus particularism in each judicial system. The exploratory factor analysis showed that our scale clearly split into two dimensions, which we interpreted as ‘formalism’ and ‘particularism’ dimensions. While the particularism items turned out to be unreliable, the formalism dimension can be declared fairly reliable. On this dimension, we found that Brazilians see their judicial system as less formalist than other judicial systems while the reverse is true for Poles—with both effects being large. Finally, a direct comparison of Brazilian and Polish perceptions of formalism indicates a very large difference in the predicted direction.

Study I offered conclusive quantitative evidence in support of the hypothesis we derived from the literature review in the preceding section: namely, that Brazil and Poland exemplify different approaches to legal interpretation and, as such, allow us to test the moderating role of formalism on the susceptibility to psychological effects in the kind of ACP.

<sup>5</sup> Unsurprisingly, the direct comparison between the Brazilian and Polish scores also reveals a significant difference in the predicted direction:  $t(119.5)=9.88$ ,  $p<.001$ , Cohen’s  $d=1.67$ .

## 6 Study II

### 6.1 Motivation of the Study

Struchiner and colleagues reported evidence that laypeople and legal professionals are equally susceptible to ACP, even when interpreting characteristically legal rules [2]. We reasoned that this result may reflect a peculiarity of particularist approaches to interpretation, and that a formalist style of legal reasoning could help to rein in various psychological effects [42]. Our survey of legal experts (Study I) established that, indeed, the Brazilian judiciary is perceived as *less* formalist than average, while Poland is perceived as *more* formalist than average.

Having established such national differences in interpretation style, we proceed next to our primary test. In our following study, we experimentally manipulate concreteness (closely following the methods of Struchiner and colleagues [2]) and evaluate whether such variation affects the judicial decision-making of legal professionals drawn from a predominantly *formalist* culture (i.e., Poland). If formalist judges are less susceptible to ACP, this would partially vindicate certain defenses of formalism, which emphasize its capacity to promote consistency of judicial decision-making. To test these assumptions, we formulated the following hypotheses.

**Hypothesis 1** Participants will endorse judicial intervention more frequently in concrete cases than corresponding abstract cases (this hypothesis assumes the general pattern of results observed by Struchiner and his colleagues [2] will be replicated with Polish subjects).

**Hypothesis 2** Participants with legal training will reveal a weaker effect of concreteness than either:

- (a) participants without legal training,
- (b) participants with legal training in the Brazilian study.

**Hypothesis 3** Judicial intervention is greater among participants high in empathic concern and/or perspective-taking.

### 6.2 Participants

Our study included three groups of participants:

1. *Judges*: A total of 72 people participated in the study in this category, with three subjects leaving the demographic questionnaire blank. All judges were approached during training sessions for judges, organized by the Polish National School of Judiciary and Public Prosecution. Out of 69 participants (mean age = 41), 18 (26 percent) were men. On average, participants in this category had 12 years (SD = 5,52) of professional experience as a judge and 17 (SD = 6,91)

years of professional experience in general. Judges were specialized in civil law (n = 38), criminal law (n = 14), family law (n = 7), labor and social security law (n = 4), and commercial law (n = 2).

2. *Law students*: This category included 183 participants, with two leaving the demographic questionnaire blank (mean age = 22).
3. *Laypeople*: This category consisted of 86 undergraduate students (mean age = 22), most of whom were Polish literature or computer science majors.

Law students and laypeople were approached while attending university classes. Participation was voluntary, such that no participants were financially or otherwise rewarded for completing the study.

### 6.3 Design and Procedure

In a between-subjects design, participants were randomly assigned to one of three conditions: abstract (“HIGH”), intermediate (“MID”), or concrete (“LOW”). Participants in each condition were handed a printed copy of the questionnaire, which included: (1) four short vignettes (at one of the three levels of abstraction), (2) the empathic concern and perspective-taking subscales of the Interpersonal Reactivity Index [28], and (3) a demographic questionnaire. Full texts of the vignettes are to be found in “Appendix 1”.

#### 6.3.1 Case Vignettes

Each of the four case vignettes presented a short story in which a legal dispute arose, accompanied by a short reference to relevant laws. Each of the four scenarios was translated from Struchiner and colleagues’ study, with some adaptations to the context of the Polish legal system.

Subjects read a case in which an individual dissatisfied with an administrative decision filed a complaint against it to the court, and were asked whether the respective administrative court should annul the decision (1: “Yes”) or dismiss the case (0: “No”). As in the original study, three vignettes (*Medication*, *Police*, *Exam*) effectively asked the subjects to decide whether a court should apply an unequivocal legal rule, which, however, can lead to undesirable results in a particular setting. On the other hand, in one vignette based on the real case of Manuel Wackenheim v. France (2002) before the UN Human Rights Committee (*Little person*) the basic issue was whether the principle of human dignity should be understood as allowing the state to paternalistically prevent individuals from making choices perceived as detrimental to themselves or rather as requiring the state to always respect the autonomy of individual choice.

As noted above, the vignettes were presented at one of three levels of abstraction:

HIGH: which presented a given problem as a hypothetical case;

MID: which described a particular case, but without any identifying details;

LOW: which described a particular case and included legally-irrelevant identifying details (e.g., proper names, locations).

For example, in the *Medication* case at the HIGH level, subjects were merely informed that, by law, the state only covers the cost of medications previously listed on the Reimbursed Drugs List and drugs not included on this list can be reimbursed only after the Minister of Health agrees to do so. This was followed by an abstract question of whether administrative courts should annul negative decisions by the Minister of Health if a given medication is necessary to cure specific individuals. On the MID level, the subjects were presented with the same description of the legal regulation, which was followed, though, by the description of a more specific legal case: some unidentified woman needs to undergo an expensive pharmacological therapy (that she cannot afford herself) not included on the Reimbursed Drugs List. After the Minister of Health issued a final decision refusing the reimbursement, the woman sues him before an administrative court. The subjects were asked whether the court should decide in favor of the plaintiff and annul the Minister's decision. Finally, the LOW version shared the structure with the MID level but also furnished a series of legally irrelevant details: the name and age of the woman, her place of residence, the name of her disease as well as the name of the medication she needed (as mentioned above, this difference boils down to the degree of identifiability).

### 6.3.2 Interpersonal Reactivity Index

Following Struchiner and his colleagues, we included two subscales of a Polish adaptation of the Interpersonal Reactivity Index [28] by Kaźmierczak and colleagues [65]: empathic concern and perspective-taking. These subscales capture affective and cognitive aspects of empathy, respectively. As mentioned earlier, affective theories posit that emotional processes undergird ACP. For instance, participants might be more empathetic towards identified individuals and favor particularist outcomes that cater to these individuals' needs.

### 6.3.3 Demographics

A demographics section included questions about participants' gender and age. Additionally, judges were asked about their general legal experience, experience as a judge, type of court in which they work, as well as the area of law in which they specialize. Law students were asked about the year of their study as well as some other details regarding their curriculum.

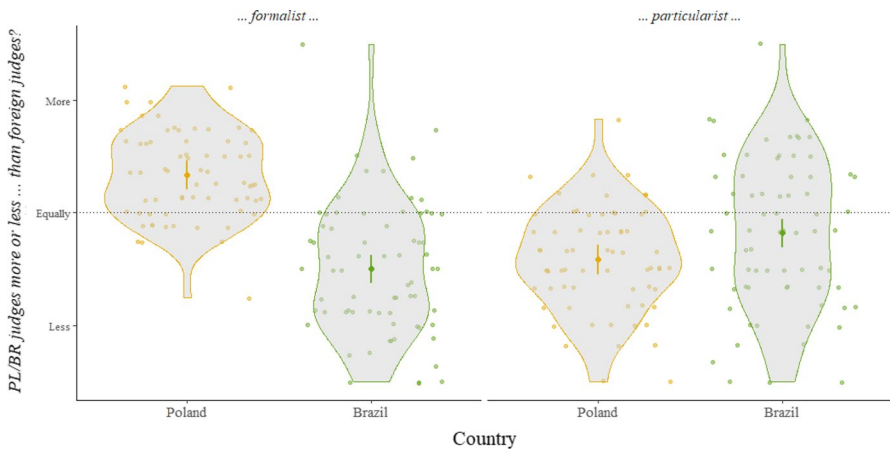
## 6.4 Results

Table 1 displays descriptive statistics by vignette jointly for all participants. To evaluate the aforementioned hypotheses, we conducted mixed-effects logistic regression with participant's *id* and scenario as crossed random effects, using the *lme4* package [66] in R version 3.5.1.

**Table 1** Proportion of affirmative answers by scenario and abstraction level

|      | Diploma           | Little person <sup>a</sup> | Height            | Medication        |
|------|-------------------|----------------------------|-------------------|-------------------|
| High | 39%<br>[30%, 49%] | 20%<br>[14%, 28%]          | 28%<br>[21%, 37%] | 60%<br>[51%, 68%] |
| Mid  | 39%<br>[27%, 52%] | 61%<br>[46%, 74%]          | 29%<br>[18%, 42%] | 50%<br>[37%, 63%] |
| Low  | 49%<br>[36%, 62%] | 53%<br>[38%, 67%]          | 39%<br>[27%, 53%] | 51%<br>[38%, 64%] |

<sup>a</sup>As the meaning of Yes/No answers in the case Little person is the opposite of the one in different cases, the coding convention is reversed in this case (in the present context: answer “No” counts as affirmative). The reversed coding of this scenario is assumed throughout the rest of the article



**Fig. 1** Violin plots for the formalist and particularist dimensions of the scale

**6.4.1 Hypothesis 1. Does the ACP Effect Replicate in a Formalist Culture?**

The tendency toward judicial intervention varied across levels of concreteness,  $\chi^2(2)=13.27, p=0.001$  (see Fig. 2). Compared to the HIGH condition ( $\hat{y}=0.36$ ), participants were more likely to favor judicial intervention in the LOW ( $\hat{y}=0.48$ ),  $OR=1.64, z=3.51, p<0.001$ ,<sup>6</sup> and MID ( $\hat{y}=0.44$ ),  $OR=1.41, z=2.54, p=0.014$ , conditions. When looking at professional judges alone, the comparison between MID and HIGH remained significant,  $z=2.11, p=0.035$ , whereas the low vs high comparison did not,  $z=1.63, p=0.10$ . Figure 1 plots the predicted percentage of the YES answers (“the court should annul the decision”) at each of the levels of abstraction.

<sup>6</sup>  $\hat{y}$  refers to the predicted percentage of answers in favor of intervention,  $OR$  means “odds ratio”,  $z$  is the regression coefficient divided by its standard error, and  $p$  refers to the p-value.

As predicted in Hypothesis 1, we observed significant differences between conditions in the predicted direction. Relative to abstract formulations, participants were more likely to favor judicial intervention in concrete (i.e., Mid and Low) cases. Thus, the main result of the original study by Struchiner and his colleagues [2] replicated in Poland.

#### 6.4.2 Hypothesis 2a. Does Expertise Mitigate the Effect of ACP?

We checked whether legal experience (judge vs. student vs. layperson) mitigates susceptibility to ACP using likelihood ratio tests. We first investigated whether (1) expertise interacted with concreteness and, then, whether (2) expertise exerted a main effect on decisions.

If gaining legal expertise decreased the susceptibility to ACP (i.e., the more legally educated the subjects, the more consistent their responses across concreteness levels), then we would observe an interaction between expertise and the level of concreteness. However, this is not what happened, as adding the interaction term to the model did not significantly improve its fit to the data ( $\chi^2(4)=2.18$ ,  $p=0.70$ ). A Bayesian re-analysis provided decisive evidence for the absence of an expertise  $\times$  concreteness interaction,  $BF_{01}=193.06$ .

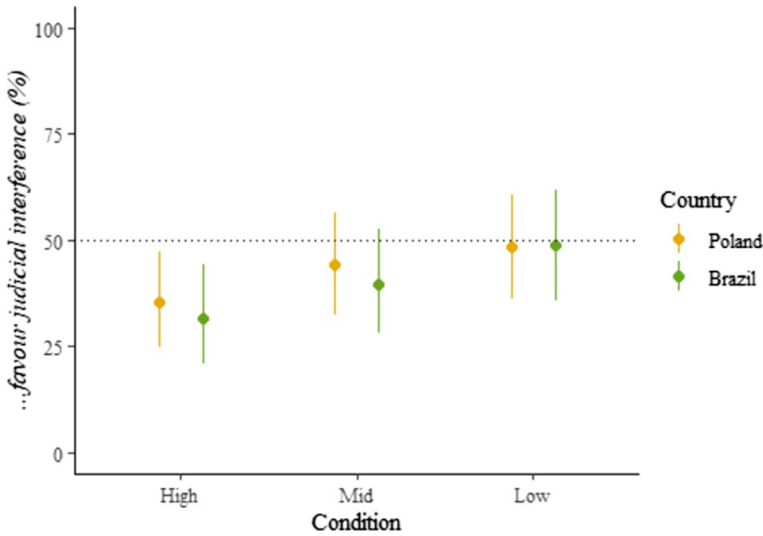
On the other hand, if subjects with greater legal expertise were either more or less likely to favor judicial interventions (irrespective of the level of abstraction), we would observe that adding the main effect of expertise to the model would improve model fit. Indeed, this is what happened,  $\chi^2(2)=8.77$ ,  $p=0.012$ . In particular, law students were more opposed to judicial intervention ( $\hat{y}=0.39$ ) than either judges ( $\hat{y}=0.48$ ),  $OR=0.91$ ,  $z=2.43$ ,  $p=0.015$ , or laypeople ( $\hat{y}=0.47$ ),  $OR=0.89$ ,  $z=2.37$ ,  $p=0.018$ .

#### 6.4.3 Hypothesis 2b. Does a Formalist Culture Mitigate the Effect of ACP?

Next, in order to examine the difference between formalist and particularist legal cultures, we jointly analyzed the results obtained in Poland and those reported in Struchiner and colleagues' study [2], and treated culture (i.e., Poland, Brazil) as an additional factor in the following analyses. Once again, we compared the model fit using likelihood ratio tests, to assess whether (1) culture interacted with concreteness, and/or (2) exerted a main effect on decisions.

Adding the *culture*  $\times$  *condition* interaction term did not increase model fit,  $\chi^2(2)=0.93$ ,  $p=0.63$ , and neither did adding the main effect of culture,  $\chi^2(1)=0.32$ ,  $p=0.57$ . Thus, we found no evidence that participants in one culture were more prone to ACP than participants in the other culture, or that participants from either culture are more likely to favor judicial intervention overall. Furthermore, Bayesian model comparisons revealed strong evidence of no cultural moderation ( $BF_{01}=50.16$ ), and substantial evidence of no mean difference in judicial intervention ( $BF_{01}=10.97$ ).

Repeating the above analyses on the subset of legal professionals did not substantially alter the results: The *culture*  $\times$  *condition* interaction did not attain statistical significance,  $\chi^2(2)=3.42$ ,  $p=0.18$ , and neither did the main effect of culture,



**Fig. 2** Percentage of decisions in favor of judicial interference by condition with comparison of differences (all groups of subjects analyzed jointly)

$\chi^2(1)=2.05, p=0.15$ —though in this case support for the null models was much more modest ( $BF_{01}=4.68, 3.70$ ). If anything, the difference trended in the opposite direction—with Polish professionals ( $\hat{y}=0.47$ ) slightly *more* likely to favor particularist decisions than Brazilian professionals ( $\hat{y}=0.40$ ). Importantly, even among legal professionals, the condition term improved model fit,  $\chi^2(2)=7.26, p=0.027$ —suggesting that Brazilian and Polish professionals alike reveal ACP effects.

#### 6.4.4 Hypothesis 3. Does Empathic Concern/Perspective Taking Affect the Decisions?

To assess the influence of empathic concern and perspective-taking, we conducted a series of model comparisons (between linear mixed-effects regressions) with and without the  $z$ -scored IRI scores entered as fixed effects. First, we sequentially added (i) the perspective-taking term, and (ii) the *perspective-taking*  $\times$  *concreteness* interaction. Neither model comparison yielded effects of perspective-taking, both  $ps > 0.05$ . Next, we repeated the process with the empathic concern term: Adding the empathic concern term improved model fit ( $F(5,6)=6.422, p < 0.01$ ), whereas adding the *empathic concern*  $\times$  *concreteness* interaction term did not. The model comparison suggested that empathy plays a similar role across conditions, with more empathic participants somewhat more likely to decide in favor of judicial review in any condition,  $OR = 1.15, p = 0.011$ . However, when looking separately by levels of concreteness, the simple effects of empathic concern did not reach the threshold of statistical significance.

Thus, at a broad level, we obtained convergent evidence that empathic concern, but not perspective-taking, is implicated in participants' decision-making. A closer

look at the effect of empathic concern revealed a subtle, but noteworthy, difference across studies: While in the study by Struchiner and his colleagues empathic concern played a selective role in mid-level conditions, our present data revealed a weaker *main* effect across levels of abstraction.

## 7 Discussion

The central objective of this study was to test the assumption that the strategy of judicial interpretation that legal decision-makers typically adopt in a given jurisdiction affects their propensity to some psychological effects known from cognitive psychology and experimental moral philosophy. More specifically, we wanted to test a view often favored by some proponents of legal formalism that legal decision-makers accustomed to sticking to the literal meaning of rules whenever possible would be more immune to many biases affecting judgement and decision-making. Furthermore, as much as such biases are assumed to lead to normatively undesirable consequences, the increased immunity to them would be an argument in favor of formalism as an interpretive strategy.

We tested this assumption against the operation of ACP and IE effect, two possibly intertwined psychological effects which are particularly likely to affect the process of legal interpretation (and to be qualified as unwelcome biases by formalists). Our study compared the behavior of Brazilian and Polish participants. This choice was based on existing legal literature suggesting that those two legal cultures exemplify particularism and formalism, respectively, and was further justified by our novel assessment of differences in interpretation style (Study 1).

For the purpose of examining our primary prediction (Study 2), the most informative group of subjects was the sample of professional Polish judges. They might be construed as engaging in formalist mode of reasoning to an extreme extent: (a) because they come from a generally formalist legal culture, and (b) because, as members of the Polish judiciary, they accrued professional experience and persisted in an environment that rewards adherence to the literal meaning of the law.

If the formalist strategy of legal interpretation indeed insulated its practitioners from effects such as ACP and IE, we would have observed that Polish judges revealed smaller differences between conditions than either Brazilian judges (because of differences in legal culture) or Polish laypeople (due to their legal education).

However, that is not what we found. Instead, we established that ACP emerged even in a formalist culture such as Poland. The comparison between abstraction conditions yielded a clear pattern of results in which the high level differed significantly from the intermediate and low levels. Participants in the high abstraction condition were less likely to favor judicial intervention than were participants in the other conditions.

What is more, legal expertise did not influence participants' susceptibility to ACP, insofar as lawyers and laypeople alike demonstrated the effect. Finally, comparing Polish and Brazilian data showed that neither general cultural differences (that would be present even among laypeople), nor specifically legal culture (in the



subsets of legal professionals) affected participants' responses. The replication of Struchiner and his colleagues' results [2] in the general sample of Polish subjects also seems to contradict the speculation that the propensity to ACP in legal contexts might be driven by general cultural differences, e.g. by differences in tightness.

Should this be interpreted as a serious argument against the assumption of insulative effect of formalism? It certainly implies that proponents of formalism should more cautiously rely on uncorroborated empirical claims and accept a greater burden of proof. Moreover, it may be that effectively applying a formalist strategy is more cognitively demanding than previously assumed.

Interestingly, the group that showed the strongest adherence to the formalist strategy—opposing judicial interventions—was the student group. One may argue that students react in such a way because they are taught the rigorous canons of legal interpretation. The methods remain vivid in their legal reasoning and they have little exposure to real-life courtroom practice. On the other hand, professional judges become more pragmatic over the course of their legal practice and learn how to exercise discretion within the boundaries of legal interpretation.

However, unequivocal implications are not easy to draw from our study, due to some limitations in its design. First and foremost, our study relied on hypothetical vignettes and a simulated context; and this methodology is often criticized as lacking ecological validity, especially when compared with the natural environment in which judicial decision-making occurs. Such criticism might be overblown, since the results of many vignette studies on judges have been subsequently corroborated by field studies and analyses of actual rulings [67]. Second, the cases were limited to the domain of administrative law, to capture a tension between individual interests and the interest of the general public. Therefore, generalizing the results to other branches of the law, i.e., private (where individual interests collide) and criminal (in which the individual has special guarantees), may be premature and more research is needed in this context.

One should also note that even if we consider the administrative proceedings as the most formalist branch of adjudication (as suggested earlier), the judges in the Polish sample were operating outside their area of specialization (this was not the case in Brazilian sample, where the professional sample included federal court judges, who solve administrative motions as well). This can be interpreted in two ways. On one hand, judges may become more formalist in their area of specialization, as their day-to-day work desensitizes them to human factors invoking empathy. On the other hand, judges working outside their specialization may stick to formalist interpretation, as they will be unfamiliar with the specifics of the given branch of law and the formalist strategy would be a safe choice. This dilemma also asks for an empirical solution.

There are reasons to believe that the lack of ecological validity might be especially problematic for our study, since the incentives for judges to stick to the literal meaning while applying legal rules were absent here. For example, a judge might follow the formalist strategy to minimize the risk of overruling by the appellate court. Thus, judges who are strict formalists in 'real life,' turn into particularists when institutional incentives are absent. Accepting said objection, however, would lead to rather interesting conclusions. If the professional subjects in our study

did not follow their normal *legal* mode of reasoning, then arguably they exhibited the result of their *moral* judgment. And if so, this would mean that even legal professionals trained in a formalist environment remain particularist in their moral decision-making.

Such an interpretation would actually constitute another argument against some of the points made by proponents of formalism. As Schauer says, legal training is largely a training in second-order moral reasoning, i.e. in accepting that compelling *prima facie* reasons to decide a particular problem in one way might be trumped by obedience to higher order rules suggesting a different, seemingly suboptimal solution [68]. To follow an example from our study: even if there are compelling *prima facie* reasons to provide a suffering individual with public funding for the medication she needs, legally-educated decision-makers might be expected to place greater emphasis on the reasons to enforce overarching, budgetary rules in the public health system. However, this is exactly what the aforementioned interpretation of our results seems to contradict: in the absence of typical institutional incentives, formalist legal professionals are as likely as non-lawyers to succumb to compelling *prima facie* moral reasons.<sup>7</sup> Even if this offers a plausible interpretation of our results, it is also largely speculative. However, we believe that it most definitely points at an interesting direction for future research.

Finally, we should mention the fact that two factors crucial to this study (the degree of legal experience and the strategy of legal reasoning) were not experimentally manipulated, making our study quasi-experimental, and limiting our ability to draw valid causal inferences. Developing a genuinely *experimental* design is by all means desirable. Future studies should, for example, induce subjects into formalist or particularist modes of reasoning through a randomized experimental intervention.

The abstract-concrete paradox plays a prominent role in judicial decision-making (see also [69]). Experienced judges in different countries issue concrete decisions that violate the principles they espouse in the abstract—and these effects are seemingly inspired by their personal feelings of empathy toward one of the parties. Although we have emphasized their theoretical implications, we also hope that, by illuminating the psychological influences on judicial decision-making, experimental findings like ours will inspire some not only further research in this area but also—in the long run—some policy considerations regarding whether to limit judicial inconsistency in practice and, if so, how.

<sup>7</sup> Another possible interpretation of our results would question a typical implicit assumption made by formalism: That the meaning of facts relevant to a given case can be taken for granted and that such facts in conjunction with the clear meaning of a relevant rule can determine the outcome of the case. It is possible, however, that even if judges agree on the meaning of the relevant rule, establishing the facts of the case is an interpretative activity that is open to the operation of psychological mechanisms such as ACP. This argument would arguably be quite damning to formalism: By focusing on the literal approach to legal interpretation, formalism contributes to a situation in which the (equally problematic) process of factual interpretation occurs out of sight and is susceptible to many potential biases. We would like to thank an anonymous referee for suggesting this interpretation.

## Appendix

### Exam HIGH

In order to enrol at a Polish university, a person that has graduated from a high school abroad must produce a document equivalent to the *matura* exam diploma, authenticated by the superintendent of schools. To authenticate this document, the superintendent of schools should, according to the law, require a certificate of high school graduation. Should administrative courts annul decisions which deny this authentication in the case of individuals that produced a certificate of an exam but not the certificate of high school graduation?

### Exam MID

A Polish American sophomore student at an American high school wants to start university studies in Poland. She has passed the SAT exam (with excellent results), which is used in the admission process to American universities. In order to apply to a Polish university, she must produce a document equivalent to the *matura* exam diploma, authenticated by the superintendent of schools. To authenticate this document, the superintendent should, according to the law, require a certificate of high school graduation. The student has produced the certificate of SAT exam, but couldn't produce a certificate of high school graduation. Should the administrative court annul the final decision denying the authentication of certificate in case of a person that produced a certificate of SAT exam but not a certificate of high school graduation?

### Exam LOW

Maria is a Polish American sophomore student at a high school in Chicago. She wants to start studies at the Faculty of Law and Administration of the University of Warsaw. She has passed the SAT exam (with excellent results), used in the admission process to American universities. In order to apply to UW, she is obliged to produce a document equivalent to the *matura* exam certificate, authenticated by the superintendent of schools. To authenticate such document, the superintendent of schools should, according to the law, require a certificate of high school graduation. Maria has produced the certificate of her SAT exam, but she couldn't produce a certificate of high school graduation. After the negative final decision, Maria filed a complaint against the decision to the administrative court.

Should the administrative court annul the decision denying the authentication of certificate in case of Maria, who produced a certificate of the SAT exam but not a certificate of high school graduation?

## Police HIGH

A public post announcement for a position in uniformed services mentions, among preferred characteristics expected from applicants, a master's degree in disciplines specified in respective regulations. Should administrative courts annul decisions refusing to accept those candidates who did not enter the service solely because they did not have a master's degree in preferred areas?

## Police MID

During the recruitment process to the Police, one person obtained very good results from physical fitness examination, psychological tests and from the interview. However, this person was classified one place below the limit due to the preferences (established in the Ordinance of the Ministry of the Interior and Administration) given to candidates holding a master's degree in the fields of law, administration, economics, or public safety. This person holds a master's degree in biology. For this reason, the candidate filed a complaint against the final decision denying the acceptance to the service.

Should the administrative court annul the decision refusing to accept this candidate, who did not enter the service solely because of not having a master's degree in the preferred areas?

## Police LOW

Renata, a young unemployed resident of Proszowice, obtained very good (in comparison with dozens of other candidates) results from her physical fitness examination, psychological tests, and from the interview during the recruitment process to the Police. Renata was, however, classified one place below the limit due to the preferences (established in the Ordinance of the Ministry of the Interior and Administration) given to candidates holding a master's degree in the fields of law, administration, economics, or public safety (Renata has a master's degree in biology). For this reason, Renata filed a complaint against the final decision denying the acceptance.

In such circumstances, should the administrative court annul the decision refusing to accept Renata solely because she did not have a master's degree in preferred areas?

## Medication HIGH

According to the law, the National Health Fund only covers the cost of those medications that are listed on the Reimbursed Drugs List. Other drugs can be reimbursed only after approval by the Minister of Health. Should administrative courts annul

final decisions by the Minister of Health denying the reimbursement of non-listed drugs if they are necessary to cure specific individuals?

### **Medication MID**

A person needs to undergo an expensive pharmacological therapy. The required drug is not listed on the Reimbursed Drugs List. According to the law, the National Health Fund covers the cost of only those medications that are listed. Other drugs can be reimbursed only after approval by the Minister of Health. Without public money, this person does not have sufficient funds to afford to purchase the drug. The Minister of Health denied the reimbursement.

Because of that, the person filed a complaint against the final decision denying the reimbursement of the drug.

Should the administrative court annul the decision by the Minister of Health in such circumstances?

### **Medication LOW**

Łucja, a 57-year old woman from Podgórze, was diagnosed with Parkinson's disease and is in need of an expensive drug known under the trade name of "Fampyra". The drug is not listed on the Reimbursed Drugs List. According to the law, the National Health Fund covers the cost of only these medications that are listed. Other drugs can be reimbursed only after approval by the Minister of Health. Without public money, Łucja does not have sufficient funds to afford to purchase the drug. The Minister of Health denied the reimbursement.

Because of that, Łucja filed a complaint against the final decision denying the reimbursement of the drug.

Should the administrative court annul the decision by the Minister of Health in such circumstances?

### **Little person HIGH**

People can make life choices that are considered to be detrimental to themselves or to interfere with their honor. Such people voluntarily undergo humiliation but they don't infringe other people's rights. Keeping in mind the principle of human dignity, should public authorities restrict such people from making such choices?

### **Little person MID**

Some bars organize dwarf-tossing contests. A dwarf has freely and clearly expressed their will to be tossed and was employed by a given bar to participate in such contest. During a competition, the dwarf is tossed by two teams. Dwarfs receive appropriate remuneration and use equipment guaranteeing lack of any physical harm.

Such contests cheer up a place: patrons have fun at the expense of the dwarf and establishments which provide such entertainment are never empty.

In one of the cities in which dwarf-tossing is a popular pastime, the City Council passed a decision—under a necessary statutory authorization—prohibiting such activities as interfering with public morals by humiliating the involved dwarfs.

One of dwarfs employed in such capacity filed a complaint against the decision to the court. Should the administrative court (having in mind the principle of protection of human dignity) annul the City Council decision under such circumstances?

### Little person LOW

Some bars in Kraków organize dwarf-tossing contests. Grzegorz is a dwarf that has freely and clearly expressed his will to be tossed and was employed by a bar on Grodzka Street. During competitions, Grzegorz is tossed by two teams, he receives appropriate remuneration and uses equipment guaranteeing lack of any physical harm. The team that throws Grzegorz furthest wins the competition. Such contests cheer up the place: patrons lift Grzegorz, throw him, and have fun at his expense. Establishments providing such entertainment, including the bar where Grzegorz is tossed, are never empty.

The City Council of Kraków passed a decision—under a necessary statutory authorization—prohibiting such activities as interfering with public morals by humiliating involved dwarfs. Grzegorz filed a complaint against the decision to the court. Should the administrative court (having in mind the principle of protection of human dignity) annul the City Council decision under such circumstances?

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