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Expanding the Horizons of Social Justice Research: Three Essays on Justice Theory

**Kees van den Bos · Russell Cropanzano ·
Jessica Kirk · Guillermina Jasso · Tyler G. Okimoto**

Foreword

By Tyler G. Okimoto[1]

In 2014, Riël Vermunt released his landmark book, *The good, the bad, and the just: How modern men shape their world* (Ashgate), an accomplishment that coincided with his receipt of the Lifetime Achievement Award in 2014 from the International Society for Justice Research. His lifetime of work in the field of justice continues to inspire generations of young researchers, an ongoing contribution to social science that is typified by his recent monograph. Vermunt (2014) provides a broad, comprehensive, and multidisciplinary overview on the psychology of fairness, while also offering thoughtful perspectives and highlighting persisting questions.

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Provoked by the desire to offer a similarly broad and inspirational commentary on the book, this issue of *Social Justice Research* features a novel approach to the book review essay, showcasing three independent essay contributions authored by leading scholars in the field of justice. In this innovative format, each contributing author was asked to separately share their unique reactions to the Vermunt monograph in a short essay. The coordinating editor then combined the three individual essays into a single manuscript, and added an explanatory Foreword and reflective Afterword; this collection was then forwarded to the journal editors-in-chief for independent review. So although all contributors appear as co-authors above, each essay was developed independently and without influence from the other authors. Each essay is clearly demarcated in this article by major headings and bylines and represents only the intellectual voice of that particular bylined author. We believe that this novel format provides a greater diversity of views on the book, thus having greater potential to stimulate important and interesting research in the field of social justice.

In Essay #1, Kees van den Bos draws on Vermunt's book and recent research in social-cognitive psychology to promote the hypothesis that an individual's genuine concern for fairness tends to correct for the self-interested impulses that drive injustice. In Essay #2, inspired by the breadth of Vermunt's review, Russell Cropanzano and Jessica Kirk discuss the potential integration of social and natural science approaches to justice research, highlighting points of complementarity and contention, while also offering a path for further integration and strengthening of our understanding of justice. In Essay #3, Guillermina Jasso considers the observer perspective adopted in Vermunt's discussion, arguing that adoption of an even broader view of justice theory may yield a richer set of predictions about inequality. These three exemplary essay contributions continue Vermunt's dialogue, offering their own unique and insightful inputs on how individuals understand and shape the just nature of their world.

Essay #1: Genuine Concerns for Fairness Tend to Correct Self-Interested Impulses

By Kees van den Bos[2]

Riël Vermunt's (2014) book *The good, the bad, and the just: How modern men shape their world* is a pleasure to read. The book discusses many important topics and is rich with many very interesting insights. Among other things, the book focuses on the justice motive (e.g., Lerner, 1980), reactions to different forms of resource allocation (e.g., Foa & Foa, 2012; Vermunt, Kazemi, & Törnblom, 2012), and justice-related mental states (including state self-esteem and physiological stress; see, e.g., Vermunt & Steensma, 2003; Vermunt, Van Knippenberg, Van Knippenberg, & Blaauw, 2001). In discussing these issues, the book provides a "Grand Tour" of the social justice literature. It does so by explicitly adopting an interdisciplinary approach to the study of social justice, aiming to integrate insights from a variety of disciplines such as social psychology, sociology, political sciences,

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behavioral economics, psychophysiology, and philosophy. The book also combines a Western European perspective on science that adopts a broad view on "justice sensations" one could say (cf. Huizinga, 2014) with a more pragmatic and micro-oriented approach to the study of social justice (cf. James, 1983). In short, the book is a "must read" for anyone interested in issues of social justice.

One of the core themes the book examines is the interplay between fairness concerns and self-interest. This is illustrated by the main title of the book ("The Good, The Bad, and The Just") and also by the book's discussion of two fundamental motives that play a role in allocation processes and reactions to innocent victims. The book labels these two motives as altruism or "other-love" and egoism or "self-love" (see, e.g., p. 4). Important parts of the book focus on how at least "for some individuals, their self-love or other-love must be managed to act in a balanced way" (p. 7).

The (wonderful) book is somewhat ambiguous as to how exactly "self-love" and "other-love" are balanced by people. Furthermore, the book argues that "justice may … be regarded as taking a position … that takes into account both the self-love and the other-love accounts" (p. 8) and speculates that "the idea of rational other-love is best realized in the justice motive" (p. 9). I find these statements a bit problematic. For example, many studies on the justice motive show that people want to belief in a just world where good things happen to good people and bad things happen to bad people. Consequently, when individuals are confronted with crimes and the perpetrator of the crimes has not been caught, they tend to blame and derogate the victims of the crimes, even though these victims are innocent and objectively cannot be blamed for what happened to them (for a more thorough discussion, see, e.g., Lerner, 1980). Thus, ironically, because we want to belief in a just world, we are sometimes tempted to blame innocent others for what happened to them. This suggests that just-world beliefs are at least sometimes used in processes of self-regulation and self-defense (Loseman & Van den Bos, 2012). To me it seems difficult to attribute the blaming and derogation of innocent victims to genuine, altruistically oriented justice motives. Thus, there seems to be some ambiguity in how just-world theory treats the relationship between people's genuine concerns for justice and their sometimes self-interested reactions, for instance when discussing how individuals tend to psychologically protect themselves when being confronted with innocent victims of crimes.

Fortunately, Riël Vermunt's book provides a solution to this issue. That is, on p. 188 of the book, Vermunt discusses the research by Knoch, Pascual-Leone, Meyer, Treyer, and Fehr (2006). These authors studied whether people accept or reject unfair offers made to them by other participants in ultimatum games. Vermunt argues that people's first reactions to the unfair offers are such that they "are inclined to satisfy their self-interested needs" and that controlling this self-interested impulse "overrides this primary impulse" (p. 188). Vermunt further notes that the dorsolateral prefrontal cortex (DLPFC) is involved in the control of impulsive reactions. Thus, impairing the DLPFC by low-frequency repetitive trans-cranial magnetic stimulation (rTMS) "will inhibit the control function of the DLPFC and thus strengthen the self-interest motive" (p. 188). Knoch et al. (2006) indeed show that inhibiting the right DLPFC substantially reduces people's willingness to reject their partners' intentionally unfair offers in ultimatum bargaining games. These findings suggest that control is needed to fight or resist unfairness.

In our own laboratory, we have found evidence that is in line with this line of reasoning. In several studies, we examined how satisfied people were with outcomes that were better than the outcomes of comparable other persons. Building on classical and modern social psychological theories, we argued that when reacting to these arrangements of advantageous inequity, judging the advantage is quick and easy as self-interested preferences are primary (Messick & Sentis, 1983; see also Zajonc, 1980). We further proposed that adjusting this appraisal requires cognitive resources as it entails integrating fairness concerns with the initial preference appraisal. Extending the literature on cognitive load, we therefore predicted that people should be more satisfied with advantageous inequity when cognitive processing is limited. Findings across several different experimental paradigms supported our predictions (Van den Bos, Peters, Bobocel, & Ybema, 2006).

I further note that, building on Strack and Deutsch (2004), it can be argued that both egoism-based preferences and fairness perceptions can work in parallel such that, once activated, both processes simultaneously influence people's reactions and the occurrence of social behavior. However, there might be an asymmetry such that it is more likely that the fairness route is more easily impaired compared to the egoism route (the latter being more automatic than the former; Van den Bos & Lind, 2013).

Importantly, although the findings briefly reviewed here suggest that people's primitive core may sometimes (e.g., when their cognitive capacities have been severely limited) push them in an egocentric direction, it may well be the case that frequently people try to free cognitive resources to do the right thing. Thus, fairness is frequently a very real concern to people (Van den Bos et al., 2006). Furthermore, it may well be that for the majority of people, the genuine self seems to be a prosocial self (Van den Bos et al., 2011).

Thus, my hypothesis is that genuine concerns for fairness tend to correct self-interested impulses most of the time (but not always) among most (but not all) individuals. There is some evidence for this hypothesis and also some evidence to the contrary (see, e.g., Rand, Greene, & Nowak, 2012). Future research can and should test this hypothesis in detail. Interestingly, work in other domains seems to be related to this issue as well, such as research on more automatic and more controlled components of stereotypes and prejudice (see, e.g., Devine, 1989). I hope this suggests that Riël Vermunt's book may not only inspire fairness researchers, but also may have a well-deserved impact in the behavioral and social sciences more broadly.

Essay #2: Two Paradigms for the Empirical Study of Justice

By Russell Cropanzano and Jessica Kirk[3]

How do people come to be fair? In posing answers to this question, social scientists and natural scientists have tended to work within their own conceptual domains,

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sometimes to the exclusion of others. To describe these approaches very generally—and asking for the reader's patience as we do so—we can distinguish at least two loose paradigms for the scientific study of justice. On the one hand, there is a strong *social science model*, which highlights the importance of various social collectives, such as societal cultures (e.g., Shao, Rupp, Skarlicki, & Jones, 2013), organizational norms (e.g., Kabanoff, 1991), and unit-level climate (e.g., Li, Cropanzano, & Molina, in press). On the other hand, there is an emerging *natural science model*, which tends to use such phenomena as natural selection (e.g., Folger & Skarlicki, 2008) and neural processing (e.g., Becker, Cropanzano, & Sanfey, 2011) as explanatory concepts. Both approaches have much to teach us, but they are grounded in different research traditions and are difficult to integrate. This may be why thoroughgoing books on justice are rare. Still, taking up the challenge is a worthwhile endeavor because there is often much to learn from different points of view. In this way, conceptual diversity can open a path to further knowledge (Ashkanasy, Becker, & Waldman, 2014).

In *The Good, the Bad, and the Just*, Vermunt (2014) reviews much of what we know about these two approaches to justice. In so doing, the book provides a bridge across the divide between the social science and the natural science paradigms. Vermunt's contribution is not so much that he has integrated distinct theories, though he has certainly accomplished this. Rather, it is that Vermunt has integrated distinct *types* of theories, social science and natural science, and this achievement is both more difficult and less common.

The Good, the Bad, and the Just is primarily concerned with the empirical study of justice, that is, with theories and findings that explain and describe the behaviors of individuals and groups (Cugueró-Escofet & Fortin, 2014). Normative traditions of justice receive less attention. For example, ethical philosophy is discussed in a few places, but is not the main focus of the book (for reviews, see Bird, 1967; Sandel, 2009). Rather, *The Good, the Bad, and the Just* uses theory and research from both social science (e.g., historical change, learning) and natural science (e.g., natural selection, the structure of the prefrontal cortex) approaches to fairness.

We have represented this general perspective of justice in Fig. 1, an integrated model derived from a number of sources (e.g., Pinker, 2002; Rose, 2001). At the center is the phenomenon in question—the individual psychology of justice. The paths to this box, from the top and bottom, represent the two conceptual paradigms. In particular, we distinguish between the social science approach, which begins at the level of cultures and socializing societal groups, and a natural science approach, which begins with natural selection and neuroscience. Vermunt's (2014) thinking, of which more will be said in a moment, emphasizes the broad agreement between these two perspectives. We illustrate this with the several black arrows that appear in the figure. However, there are also points of disagreement, illustrated by the two white arrows drawn with dashed lines. Our discussion includes these points and considers how these thornier issues can be resolved, thereby creating a more unified framework for understanding justice.

Fig. 1 Two paradigms of justice
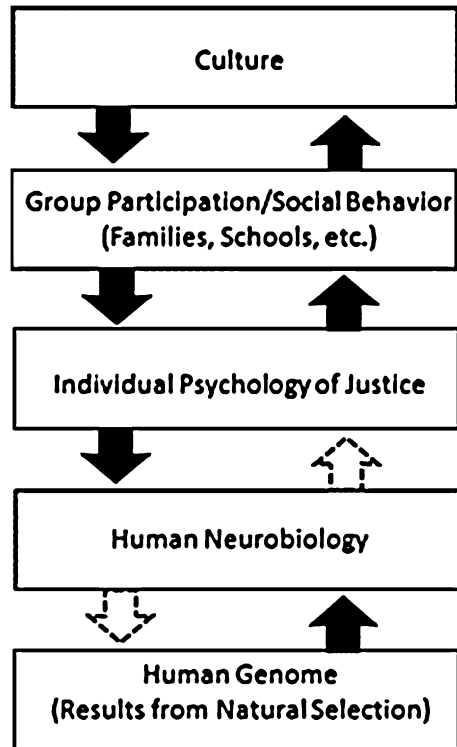
The Social Science Model

Speaking very generally, social science approaches to justice tend to start with culture and work "downwards" (from the figure's perspective) toward individual behavior (cf., Shao et al., 2013). Since the about the middle of the last century, this social science paradigm has been the most common approach to understanding human social behavior. Accordingly, researchers have placed a great deal of emphasis on culture, small groups, and child-rearing practices (for a historical study, see Degler, 1991; for a critique, see Pinker, 2002).

Overview of the Paradigm   Within a large group, there is a set of shared, though often unstated, assumptions about what constitutes appropriate conduct. These assumptions are transmitted to others within the group, thereby impacting our sense of justice (James, in press). As Vermunt argues (2014, see especially Chapter 2), national cultures can change over time, and this will impact what is and is not considered fair (Li & Cropanzano, 2009). The same can be said of organizational cultures (Monin, Noorderhaven, Vaara, & Kroon, 2013). Reflecting this thinking, the uppermost downward arrow suggests that standards of fair social behavior are drawn, at least in part, from one's cultural context (James, Hall, Redsteer, & Doppelt, 2008). This, in turn, trickles down to various socializing institutions, such as families and schools (J. Wilson, 1993). As Vermunt (p. 194) states: "Children

learn from parents and teachers the behaviors the tutors think fit for their pupils." On the same page, he adds that "Parents reward their children when they allocate resources fairly between themselves and other children." In this fashion, Vermunt incorporates the social science model into his thinking, though perhaps with less explicit emphasis on culture than is common. For instance, the word "culture" does not appear in the book's index.

Often social science thinkers stop at the level of the individual. In a sort of scientific division of labor, they leave neurobiology to other disciplines. Vermunt (2014) does not arguing that learning can shape brain functioning. For example, Vermunt (Chapter 5) presents evidence that successful classical conditioning causes dopamine to be released in the presence of a conditional stimulus. This is one way in which learning changes neural processes. Consistent with Vermunt's model, there is considerable evidence indicating that culture can shape brain structures (e.g., Freeman, Rule, Adams, & Ambdy, 2009; Hedden, Ketay, Araon, Markus, & Gabrieli, 2008). To indicate this, we have drawn a third downward black arrow.

Point of Controversy   The final downward arrow, which is represented with dashes, is left white. This is a point of controversy, or perhaps simply neglect, that Vermunt (2014) helps us to address. As a rule, social scientists have not emphasized how culture and, more broadly, interpersonal behavior drive evolution. Vermunt argues, however, that this is exactly what has occurred. In *The Good, the Bad, and the Just,* Vermunt (2014) discusses the importance of food sharing and the need for cooperation on the development of justice. Big game hunting and long periods of parental care made this link especially strong (see also, E. Wilson, 1978). Unjust people would have been undesirable in hunter-gather groups and, as such, stood less chance of passing their selfish genes to the next generation (Boehm, 2012). This is an important idea, and we will return to it very soon, as we consider a second point of contention.

Conclusion: A Strong Social Science Framework   Using social science thinking, Vermunt's (2014) analysis links all five of the phenomena illustrated in Fig. 1— culture affects groups within society, these groups socialize people to a certain view of justice, this development impacts individual brain activity, and—in the very long run—all of this may impact human evolution. The three downward arrows presented in black are unlikely to arouse much controversy. The final downward arrow, in white, is more debatable. However, Vermunt has made a compelling case that human interpersonal behavior, at least partially driven by individual and group preferences, may help to shape our species' genome (see also, Boehm, 2012; Wade, 2006). Implicitly, Vermunt has argued that social scientists have inadvertently *understated* the evidence favoring their model by neglecting the manner in which human interactions have impacted our evolution.

The Natural Science Model

While the social science approach has had a long reign, developments over the last few decades have posed a set of "bottom-up" perspectives from the natural sciences

[see Degler (1991) for a generally favorable review; for a critique, see Rose (2001)]. In Fig. 1, we have represented this approach with the upward pointing arrows on the right. The natural science model begins at the bottom of the page. The human genome is shaped by natural selection (see Vermunt, 2014, Chapter 2; Wright, 1994). Our genes shape our brain development and in this way give rise to behavior (Chapter 5, see also Folger & Skarlicki, 2008). The black arrows in this sequence are unlikely to provoke criticism. Vermunt and others have noted that individuals' thoughts and feelings regarding justice (and injustice) can shape outlooks of social groups (e.g., in Chapters 4, 6, 7, and 8). As a result, justice can lead to positive group outcomes (e.g., Tripp & Bies, in press) and social change (James et al., 2008).

Point of Controversy   But we have cheated a bit in our explanation, as we have so far ignored a central point of contention—the white upward pointing arrow. This indicates that human neurobiology, as shaped by evolution, impacts social behavior and ultimately culture (for an example of how this process is supposed to work, see Barkow, 1992). Historically speaking, this possibility has been seen as anathema to social scientists (Tooby & Cosmides, 1992). As we have discussed, social science thinking has tended to emphasize top-down approaches (Becker et al., 2011). On some occasions, biologically informed theorists have attributed this opposition to overly narrow conceptual assumptions, some of which were political (e.g., Degler, 1991; Pinker, 2002). Perhaps this is true in some cases, but after reading *The Good, the Bad, and the Just*, we have come to believe that there is a more fundamental reason—the social scientists are being good scientists.

There is an inherent difficulty in using Darwinian thinking to understand justice. Though resolvable, at least in principle, this enigma should not be understated. Natural selection is based on the competitive reproductive success of individuals. In this sense, it is an inherently "selfish" process, at least by way of analogy (Singer, 1981). Scholars who propose that justice has an evolutionary basis are stating, in effect, that a selfish process has shaped a brain that drives unselfish social behavior. Such a process is not impossible, but it is not readily obvious how this would occur. It is certainly reasonable for social scientists (and others) to raise skeptical questions. Natural science theorists need to provide an explanation as to how this counter-intuitive process might work. We suspect that there are few, if any, social scientists who believe in a *tabula rasa* theory of human learning. Nor do we see the social science community as having antipathy toward neuroscience per se. However, it is difficult for researchers to use evolutionary models effectively without a reasonable account of how selfish genes produce unselfish (or at least not entirely selfish) people.

Vermunt (2014) unravels this issue by turning back to social science. As we saw earlier, Vermunt also pushed the social science model "downward," to the evolutionary base of Fig. 1. Human beings maximized their survival advantage when members of cooperative groups shared resources and minimized abuses of power. Consequently, there was a reproductive advantage to individuals who possessed some sense of altruism. According to Vermunt, the trade-off between self-interest and altruism allowed for the development of justice. *Homo sapiens* acquired a capacity for justice because it made our ancestors more successful

participants in human social life (for similar models, see Boehm, 2012; Wilson, 1978; Wright, 1994).

Conclusion: A Strong Natural Science Framework   Using natural science thinking, Vermunt's (2014) analysis links all five of the phenomena illustrated in Fig. 1— evolution favored individuals who had tendencies toward altruism, the resulting neural structures allowed us to act justly and respond to fairness, this behavior in turn carried into social groups and, ultimately (well, hopefully), into society. *The Good, the Bad, and the Just* has placed the natural science and the social science paradigms side by side. But here is the larger point—the natural science model is made stronger by the inclusion of social science thinking. We can say the same thing in reverse. The social science model is made stronger when it does not ignore natural science thinking.
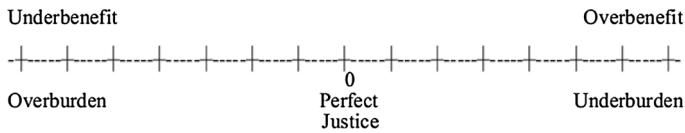
Conclusion

Social science and natural science do not always agree. However, these are different perspectives and not blood rivals. The two approaches do not need, and in fact should not try, to subordinate one another. Their healthy debate and thoughtful responses give the study of justice much needed depth and complexity. We can learn much from the diversity of ideas presented by scholars from different discipline. *The Good, the Bad, and the Just* is an excellent place to start.

Essay #3: A New Observer: Vermunt on Justice

By Guillermina Jasso[4]

In the world of distributive justice, there are three main actors, three main terms, and one enveloping relation among them. The three actors are the Observer, the Allocator, and the Rewardee; and the three terms are the Actual Reward, the Just Reward, and the Justice Evaluation. The Observer forms ideas of the Just Reward for the Rewardee, and the Allocator assigns the Actual Reward to the Rewardee. Given the variability in ideas of the Just Reward across Observers—the great Hatfield Principle, "Equity is in the eye of the beholder" (Walster, Berscheid, & Walster, 1973/1976, p. 4)—the interplay of multiple Allocators leading to the Actual Reward, and the operation of a variety of other factors in allocation (Leventhal, 1976), discrepancies arise between the Actual Reward and the Just Reward. Accordingly, the Observer judges whether an Actual Reward is just or unjust and, if unjust, assesses the magnitude of the injustice, represented by the Justice Evaluation, with zero representing the point of perfect justice, negative numbers representing unjust underreward, and positive numbers representing unjust overreward (Fig. 2). A person may play one or more parts—for example, Allocator only, or Observer and Rewardee, or Allocator–Observer–Rewardee.

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Underbenefit                                    Overbenefit

-+----+----+----+----+----+----+----+----+----+----+----+-
                          0
Overburden              Perfect                Underburden
                        Justice
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Fig. 2 Mathematical representation of the justice evaluation

Riël Vermunt (2014) has written a thoughtful and graceful book that at first reading appears to be chiefly about allocation and, in particular, about the Allocator—as implicit in the book's title: *The Good, the Bad, and the Just: How Modern Men Shape Their World*. However, a closer reading suggests that the book is about the Observer, in particular, about one Observer, namely Vermunt. While there is a rich tradition in philosophy of writing as or about an Observer—from Plato's Guardians to Firth's (1952) Ideal Observer to Hare's (1981) Archangel—social science has largely followed the Hatfield Principle, together with its twin corollaries that every person is an important Observer and that all Observers count equally, especially given the part they play in the long train of behavioral and social consequences of experienced justice and injustice.[5]

How can one think fruitfully about Vermunt's accomplishment? One approach is to compare the ideas and reasonings of Vermunt as Observer to the ideas and reasonings predicted for all Observers by justice theory. In the following pages, I provide three examples of these contrasts. But first, we look briefly at the main postulate of justice theory, the Justice Evaluation Function.

The Justice Evaluation Function combines the operations of the three actors and the three terms in a simple way, taking the logarithm of the ratio of the Actual Reward A to the Just Reward C to generate the Justice Evaluation J:

$$J = \theta \ln\left(\frac{A}{C}\right),\tag{1}$$

where θ is the signature constant, whose sign is positive for goods and negative for bads and whose absolute value measures the Observer's expressiveness. The Justice Evaluation Function has many useful properties, including loss aversion, symmetry, and scale invariance.

Table 1 provides some examples of the Justice Evaluation Function at work. It shows the formula and the Justice Evaluation for two Rewardees, Jones and Smith, for whom the Just Reward is fixed by some Observer at 100 and whose Actual Reward varies from 25 to 175. Except for the top row, in which both Jones and Smith have Actual Rewards of 100, Jones is always overrewarded and Smith always underrewarded. Loss aversion is evident in the figures of Table 1; deficiency is felt more keenly than comparable excess. For example, when Jones has an Actual

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[5] Specification of the three fundamental actors in distributive justice has a rich history. While the Rewardee appears in almost all theoretical and empirical analysis, explicit inclusion of the Allocator ranges from the reluctance of the theologically minded (who fear that injustice may be attributed to God) to the embrace of Lerner (1975, 1980), Leventhal (1976), and Vermunt, and the Observer, long implicit, becomes explicit in Austin and Walster (1975:478, 494) and Jasso (1978:1400).

Table 1 Justice evaluation, loss aversion, and the Golden Number

Jones			Smith			Loss aversion ratio
A	$J = \ln\left(\frac{A}{100}\right) \approx$		A	$J = \ln\left(\frac{A}{100}\right) \approx$		$\frac{|J_{\text{smith}}|}{J_{\text{jones}}}$
100	$\ln\left(\frac{100}{100}\right)$	0	100	$\ln\left(\frac{100}{100}\right)$	0	–
123.6	$\ln\left(\frac{123.6}{100}\right)$	.212	76.4	$\ln\left(\frac{76.4}{100}\right)$	−.269	1.27
125	$\ln\left(\frac{125}{100}\right)$	.223	75	$\ln\left(\frac{75}{100}\right)$	−.288	1.29
150	$\ln\left(\frac{150}{100}\right)$	.405	50	$\ln\left(\frac{50}{100}\right)$	−.693	1.71
161.8	$\ln\left(\frac{161.8}{100}\right)$	.481	38.2	$\ln\left(\frac{38.2}{100}\right)$	−.962	2
175	$\ln\left(\frac{175}{100}\right)$	.560	25	$\ln\left(\frac{25}{100}\right)$	−1.386	2.48

The Just Reward is fixed at 100

Reward of 125 (an increment of 25 to the Just Reward of 100), the Justice Evaluation equals .223, and when Smith has an Actual Reward of 75 (a decrement of 25 to the Just Reward of 100), the Justice Evaluation equals −.288, which has a larger absolute value than .223. Loss aversion is evident in every row of the table.

Table 1 can also be read a different way—as an allocation scheme. Either Jones or Smith is the Allocator, and there are 200 units to allocate. The top row represents equal division. In all the other rows, the Allocator is dividing unequally. If Jones is the Allocator, Jones is systematically giving more to self than to Smith; if Smith is the Allocator, Smith is systematically giving more to Jones than to self. Smith as Allocator is the Francis of Assisi of Table 1—"It is in giving that we receive"— while Jones as Allocator has many twins.

Table 1 also provides, in the rightmost column, the loss aversion ratio—the ratio of the absolute value of J in the underreward case to J in the overreward case. As shown, the loss aversion ratio increases as the size of the increment/decrement increases. It equals 1.29 when the increment/decrement is 25, and when the increment/decrement is 75, it equals 2.48. Importantly, it passes through 2, which was once considered the constant and universal loss aversion ratio, before it was realized that the loss aversion ratio cannot be constant. And, amazingly, the loss aversion ratio equals 2 when the increment/decrement is the product of the Actual Reward and the Golden Number (Jasso, 2006, p. 209):

$$\left(\frac{\sqrt{5} - 1}{2}\right) \approx .618. \qquad (2)$$

As shown in Table 1, in this case, the Justice Evaluation is −.962 in the underreward situation and .481 in the overreward situation—for a loss aversion ratio of 2.

Finally, the sense of justice has a long reach. Treating the Justice Evaluation Function as a postulate makes it possible to deduce an abundance of testable predictions for all domains of behavior, including novel predictions. Figure 3 provides a map of the world of distributive justice. The three illustrations below compare predictions of justice theory with the ideas discussed by Vermunt as Observer.
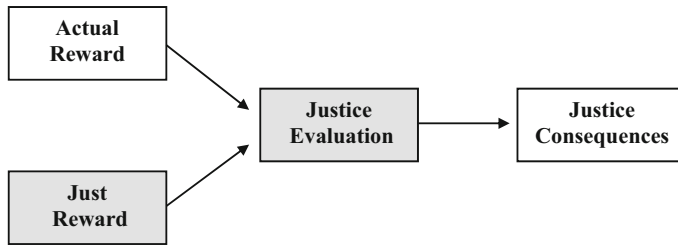
Fig. 3 The world of distributive justice

Vermunt as Observer: Three Illustrations

Parental Gifts to Children   Vermunt (2014, p. 2) opens the book with examples of "allocation events," including a sketch of a father giving a birthday present to a daughter, quoted in Table 2, Panel A, left column. Vermunt as Observer forms his idea of the just birthday present as one that will make the birthday daughter happy and simultaneously make the Allocator's wife and other children happy. Vermunt's Allocator knows that all parties will compare this present to the presents received by the other children and thus tacitly consults the opinions of his wife and other children.

What might be the ideas of justice formed by other Observers? Justice theory, starting with the Justice Evaluation Function as first postulate, yields some pertinent predictions (Jasso 1993, p. 263), quoted in Table 2, Panel A, right column. Like Vermunt, other Observer parents are predicted to take into account the happiness of all the children, and Observer children are predicted to compare their presents. Accordingly, the prediction is that parents of two or more non-twin children will spend more of their toy budget at an annual gift-giving occasion rather than at the children's birthdays.

What does the empirical record say? In the USA, the obvious annual gift-giving occasion occurs at Christmas, and it turns out that toy sales spike at the fourth quarter, with 70 % of all sales at that time Jasso (1993, p. 263). This implies, assuming that one-fourth of births occur in the fourth quarter and that all children receive both birthday and Christmas gifts, that 40 % of toy sales are for birthday gifts and 60 % are for Christmas gifts. Thus, the typical child's Christmas gift is worth 1.5 times as much as his/her birthday gift. And the typical parents spend 40 % of their toy budget on birthday gifts and 60 % on Christmas gifts.

Justice theory goes further, predicting that societies will invent annual gift-giving occasions, as societies, too, have a stake in the happiness of their children. These of course will differ by cultural context, spanning New Year's Day, Eid al-Fitr, the Feast of the Three Kings, etc. Note that if all families have only one child, there is less need for an annual gift-giving occasion—as the feared comparisons will not be with siblings, under the same roof, but with other children living nearby. And this, too, leads to further predictions, for example, for gift giving when non-related children are raised like siblings.

Table 2 Contrasting Vermunt's ideas of justice with ideas of justice predicted for all Observers

Vermunt as Observer	General theoretical predictions for all Observers
A. Parental gifts to children	
"… the father who offers a present to one of his children at the child's birthday party and takes the (tacit) opinions of his wife and other children in choosing the present into account. All parties will, for instance, compare the present with what others (siblings) received. Not only is it important that the birthday girl is satisfied and feels well treated, but also his wife and his other children."	Parents who wish to preserve their children from suffering and/or foster sibship solidarity must devise a strategy [to deal with birthdays]. An obvious solution is to invent an annual gift-giving occasion, at which time all the children receive gifts from their parents, while marking birthdays with smaller gifts or a family feast….
Source: Vermunt (2014, p. 2)	[S]ocieties offer solutions. In the contemporary United States, the solution is Christmas…. [P]arents of two or more children (who do not all have the same birthday) will spend more of their toy budget at Christmastime than at the children's birthdays
	Source: Jasso (1993, p. 263)
B. Robbing the Rich	
"Robbing a rich person (an Actor-Recipient action) is morally less inappropriate (because it decreases the inequality between the beggars and rich man) than robbing a poor person, because it increases inequality."	[S]ocial welfare remains unchanged if Thief is poorer than Victim and the amount stolen is exactly equal to the difference in their pre-theft wealth. This is a "trading places" phenomenon. When Thief is richer than Victim, social welfare is always diminished. Social welfare increases only in the particular situation where Thief is poorer than Victim and the amount stolen is less than the entire difference between Thief's and Victim's pre-theft wealth
Source: Vermunt (2014, p. 128)	Guardians, Archangels, and other Ideal Observers will favor two rules:
	1. Never steal from someone poorer than yourself
	2. If you steal from someone richer than yourself, never leave him/her poorer than you were before the theft
	Source: Jasso (2001, pp. 371, 377)
C. Loss Aversion and the Golden Number	
"ASSUMPTION. There is an innate drive to allocate resources fairly, that is, allocate resources taking into account one's own and others' positions reasonably; 'reasonably' may be defined as lying between equal division and golden ratio division ($\phi = 1.618$; in allocating one hundred units of a resource—money, goods, service, love, status, or information—the actor will receive 61.8 and the recipient 38.2). 1.618 may be seen as the upper limit of what is judged as fair."	"Recent empirical work in economics indicates that loss aversion is constant, loss being felt twice as keenly as gain. Analysis of the justice evaluation function indicates that the ratio of loss to gain is not constant and, further, that loss is felt twice as keenly as gain if and only if the loss or gain equals the Golden Number, or approximately 61.8 % of the original amount."
"Losses are twice as powerful psychologically as gains."	Source: Jasso (2006, p. 209)
Source: Vermunt (2014, pp. 189–192)	

Robbing the Rich   Vermunt (2014, pp. 128–129) considers the justice of theft in the case where Thief and Victim differ in wealth, concluding, as shown in Table 2, Panel B, left column, that the key to assessing fairness is the change in inequality. Accordingly, robbing a rich person is less unjust than robbing a poor person, because the first reduces inequality while the second increases it.

What might be the ideas of justice about theft formed by other Observers? Justice theory predicts that Guardians—or Observers acting as Guardians and vigilant for the commonweal—will seek to maximize the social welfare (Jasso, 1980, 2001). Social welfare is represented by the average of the Justice Evaluations in a group, which declines as inequality increases. As shown in Table 2, Panel B, right column, justice theory predicts that social welfare always declines when Thief is richer than Victim. However, when Thief is poorer than Victim, social welfare may increase, remain unchanged, or decline, depending on the amount stolen and the post-theft wealth of Thief and Victim. The break-even point occurs when the amount stolen is exactly equal to the difference in Thief's and Victim's pre-theft wealth; at this point, social welfare (and inequality) remains unchanged. When Thief steals so much that the (formerly richer) Victim is poorer than the Thief was before the theft, inequality increases and social welfare declines. Thus, there is only one case of theft in which social welfare increases—when Thief is poorer than Victim and the amount stolen is less than the difference between Thief's and Victim's pre-theft wealth.

Accordingly, as shown in Table 2, Panel B, right column, justice theory predicts that Guardians, Archangels, and other Ideal Observers will favor two rules. First, never steal from someone poorer than yourself. Second, if you steal from someone richer than yourself, never leave him/her poorer than you were before the theft (Jasso, 2001, pp. 371, 377).

Vermunt's (2014, pp. 128–129) discussion implies that he would favor the first rule predicted by justice theory. However, it is not clear what Vermunt would say about the second rule. On the one hand, he clearly favors reducing inequality. On the other hand, he stops short of assessing the effect of the amount stolen, which, if large enough, can increase inequality in the case of a poor Thief and a rich Victim.

Justice theory yields many more predictions about theft, predictions covering all possible Observers, not only Guardians but also Thieves, Victims, and everyone else, in both insider theft and outsider theft (Jasso, 2001). These include the predictions that Thief's gain from theft is larger when stealing from a fellow group member than when stealing from an outsider and that this premium is larger in poor groups than in rich groups.

Loss Aversion and the Golden Number   Above we saw that loss aversion is a property of the Justice Evaluation Function and that the loss aversion ratio equals 2 when the Actual Reward equals the Just Reward plus or minus the product of the Just Reward and the Golden Number—or, put differently, when the loss or gain equals a fraction of the Just Reward equal to the Golden Number, or approximately .618:

$$\ln\left(\frac{C \pm C\left(\frac{\sqrt{5}-1}{2}\right)}{C}\right) \qquad (3)$$

To put it still a different way, the loss aversion ratio equals 2 when the ratio of the Actual Reward to the Just Reward (sometimes called the comparison ratio) equals one plus or minus the Golden Number, as in:

$$\ln\left(1 \pm \frac{\sqrt{5}-1}{2}\right) \qquad (4)$$

Vermunt (2014, pp. 189–192) considers the question whether in dividing a fixed pie there might be a zone of justice, and concludes that this zone extends from equal division to a division based on the Golden Number, in which the Allocator gives 61.8 % to self and 38.2 % to the other (Table 2, Panel C, left column). Table 1 includes this division in the second row. As shown, this golden ratio division yields Justice Evaluations of .223 for the Rewardee with the Actual Reward larger than half and −.288 for the Rewardee with the Actual Reward smaller than half—for a loss aversion ratio of 1.29.

Though Vermunt does not consider the Francis of Assisi case, in which the Allocator would give the smaller amount to self, it would seem consistent with his reasoning. Thus, in Table 1, if Smith is the Allocator, Smith gives 38.2 % to self and 61.8 % to Jones.

Vermunt (2014, p. 192) goes on to say that losses are twice as powerful as gains. Two questions need to be addressed: first, whether a constant loss aversion ratio (whether at two or at any other number) is consistent with loss aversion, and second, whether a constant loss aversion ratio is consistent with the link between inequality and social welfare required for Vermunt's ideas of justice and theft.

How might other Observers approach a justice zone bounded by equal division and golden ratio division? And a constant loss aversion ratio? Justice theory, starting with the Justice Evaluation Function as first postulate, predicts loss aversion—that deficiency is felt more keenly than comparable excess—but also that the loss aversion ratio varies, as shown in Tables 1 and 2, Panel C, right column (Jasso, 2006, p. 209). As for the justice zone, justice theory predicts a single point of perfect justice and a continuum of Justice Evaluation magnitudes. It is not immediately clear why, for example, the division shown on the second row of Table 1 would be acceptable but not that on the third line—why Jones having 125 instead of 123.6 and Smith having 75 instead of 76.4 would catapult the division from inside to outside the justice zone.

Of course, it is possible that further theoretical work could yield a prediction for the golden ratio justice zone. As well, empirical work might reveal a predilection for this type of division among many Observers, which would in time be shown to follow logically from justice theory.

Concluding Note

Vermunt as Observer is an engaging companion as we explore the world of distributive justice. Here I contrasted three of his views as Observer with predictions of justice theory. There is substantial overlap in all three sets of contrasts. When parents give gifts to their children, they want above all their children's happiness. When Observers judge theft, they consider its effect on inequality. Deficiency is felt more keenly than comparable excess, and the Golden Number arises in justice theory. More important, the stage is set for further exploration of the non-overlapping areas. Deductive lines will surely stretch from justice theory to all Observers, including Vermunt.

Afterword[6]

This collection of three independently authored essays exemplifies the quality and breadth of ideas sparked by Vermunt's (2014) monograph. Each essay represents the distinctive voice of its author(s), which is evident from the diversity of approaches used across the three contributions. As a leading psychologist, van den Bos moves inward to better understand the implications that the interplay between self- and other-focused concerns have for fairness. As leading scholars in the multidisciplinary management field, Cropanzano and Kirk are drawn toward elaboration on and integration of the diverse paradigmatic approaches reviewed in the monograph. Finally, as a leading sociologist, Jasso poignantly identifies value in deeper consideration of Vermunt's perspective as it rests within broader justice theory. While diverse in their reactions, each author echoes praise for *The good, the bad, and the just: How modern men shape their world*, citing it as perspicacious and thought-provoking read. We hope that this collection of essays, as well as the monograph by which they are inspired, helps to incite further inquiry in the field of social justice.

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[6] Afterword by coordinating editor, Tyler G. Okimoto.

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