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Doing Good to Self and Others: Some Ideas About the Antecedents, Processes, and Consequences of Fair Resource Allocation

Riel Vermunt

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Abstract Drawing on multidisciplinary findings and ideas, I discuss in this paper fair allocation of social resources, such as goods, services, and information. It is held that the allocation event, featuring actor, recipient, and observer, as well as the social resources to be allocated by an actor, can function as a guideline for the essentials of fair behavior. The role of the essential features of allocation behavior: motivation, cognition, and emotion, as well as morality and reactions to perceived unfairness are examined. I give explanations as to why, how, and to what extent, people, in an effort to attain justice, allocate social resources between self and others and among others. I explore the conditions under which an actor may deviate from a just division of social resources, thus, instigating a reaction from recipients and observers.

Keywords Social resource allocation · Focal resource · Additional resource · Justice · Morality · Equality · Justification

Introduction

The paper is the precipitation of my Lifetime Achievement Award lecture I gave at the 15th biennial conference of the International Society for Justice Research in New York, June 2014. The aim of the lecture was to show that starting with the description of an allocation event, some "hot" justice issues can be addressed, such as the relationship between distributive justice and procedural justice, the relationship between justice and morality, between egoism, justice, and altruism, the psycho-physiological basis of morality, the role of cognition and emotion in justice behavior, the impact of significant changes in the social and physical conditions for justice reasoning, the role of justification for justice reasoning and

R. Vermunt (✉)
Department of Psychology, University of Leiden, Leiden, The Netherlands
e-mail: Vermunt@fsw.leidenuniv.nl

behavior. Not all these issues will be discussed at great length in the paper, and, I must admit, it is even worse: the discussion is in the form of ideas rather than as a systematic approach.

The Allocation Event

Life is devoted to the allocation of social resources, whether they concern love, service, goods, money, information, or status.[1] Foa and Foa (1974) define a social resource as any commodity, material or symbolic, which is transmitted through interpersonal behavior. A standard resource allocation event consists of an actor who takes the allocation decision, a recipient, and an observer. An actor's decision concerns allocation of a focal resource (what is usually labeled the outcome or the distribution) and an additional resource (usually labeled the procedure): the means or rules to allocate the focal resource. Actor, recipient, and observer evaluate the resulting *type* (for instance love instead of money) and *amount* of the allocated resource in terms of frustration, respectively, fairness.

Each individual may be an actor, a recipient, or an observer in many allocation events over the day. Examples of allocation decisions are: a father dividing presents among his children; the mother making a proposal how much time she (and her partner) will spend with the children. Each child will evaluate the fairness of the present in relation to what she was promised to receive, what she had in mind, what her siblings have received: the child is recipient as well as observer. The child may be frustrated because s/he did not get what s/he thinks s/he deserved based on what s/he was promised: s/he did not get the right toy. The work situation is also full of allocation events in which an employee is actor, recipient, or observer. The employee receives a bonus that is too low. In this example, the amount of the resource is different from what the employee thought s/he deserved. The resulting experience is one of unfairly being treated.

Another example is the employee who divides tasks between him/her and a colleague. The division of the task is labeled the focal resource: the task at hand is a type of activity that affects the body (cognition, intellect, emotion) of a person. Foa and Foa (1974) label tasks in this sense as Service. The division of the focal resource Service can be accomplished in several ways. The employee summons her/his colleague to do the task, which is without voice from the other. Or the employee asks the colleague his/her opinion about the division of tasks. Giving voice honors the other's status position as a full-fledged colleague (see Törnblom & Vermunt, 2007). In other words, the employee allocates, next to the focal resource Service, the additional resource Status between self and the other. Törnblom and Vermunt (2007)

[1] *Love* is an expression of affectionate regard, warmth, or comfort. *Status* indicates an evaluative judgment that conveys prestige, regard, or esteem. *Services* involve activities that affect the body or belongings of a person and that often constitute labor for another. *Information* includes advice, opinions, instruction, or enlightenment but excludes those behaviors that could be classified as love or status. *Money* is any coin, currency, or token that has some standard unit of exchange value. *Goods* are tangible products, objects, or materials.

have made attempts to subsume the several procedural rules under the six social resource classes proposed by Foa and Foa (1974). Some rules are difficult to bring under the resource classes and some rules can be subsumed under more than one resource class. However, many procedural rules can be subsumed under the socially crucial resource Status, indicating how important these procedural justice, but also interpersonal justice rules (e.g., dignity) and interactional justice rules (bias suppression). Other rules can be subsumed under the resource Information, emphasizing the relevance of informational justice.

The combination of focal and additional resource gives rise to some interesting perspectives. The focal resource is in most theorizing and research of a rather tangible nature: salary increase, higher position, more goods, better information. Ambrose and Arnaud (2005) label these outcomes as economic ones. The additional resource is often conceived of as less tangible: giving voice, appropriate communication, being informed on time, the socio-emotional outcomes. Material resources as additional resource are hardly investigated. According to the social resource approach to fairness, it is completely feasible to apply material resources like money as additional resource. Take the example of the politician, the actor, promising tax reduction (additional resource: Money) for entrepreneurs (recipients) in order to pass legislation for more rights for consumers (focal resource: Status).

The social resource approach of distributive and procedural justice may lead to several interesting hypotheses. Effects of choice of an additional resource (procedure) in relation to a specific focal resource on recipient's reaction have not been investigated to my knowledge. Still, the idea of finding the most fair and efficient procedure is very appealing for an actor. According to Foa and Foa (1974), a recipient's most appreciated reaction to an unsatisfactory allocation of a resource is retribution in kind: a financial bonus reduces feelings of unfairness more than voice after an as unfair felt salary decrease. In this way, there are no translation costs and the amount of the compensation in relation to the amount of wrongdoing that can be determined more exactly, increasing the amount of pure (un) fairness, that is, fairness experiences that are not "polluted" by experiences of (dis) satisfaction. Applying an additional resource that belongs to the same resource class as the focal resource will, accordingly, be felt as more pure fair (or unfair) then applying an additional resource that belongs to a different resource class as the focal resource. In this way, it will be possible to determine the *fairness gradient* of an allocation decision.

Ambrose and Arnaud (2005), conclude from results of experimental as well as questionnaire research that individuals "link their experiences of procedures and outcomes, making their justice experiences, with each more similar than different. "(p. 72). They base their conclusion partly on the high correlations between distributive justice experiences and procedural justice experiences found in empirical research. The high correlations suggest that "individuals perceive fair outcomes to come from fair procedures and unfair outcomes from unfair procedures"(p. 72). How should this suggestion be interpreted? The suggestion presupposes that there is ground of comparison, somehow, between the outcome—mostly economic—and the procedure—mostly socio-emotional. This is a rather unstable ground of comparison: it is as if one compares apples with pears. Of

course, an individual can compare the taste of the apple with that of the pear, but on what is the taste based? Maybe that the individual will state that both are fruits and thus can be compared. Still, apples can be better compared with other apples than with pears: the difference in form between apple and pear affects the taste while this "impurity" is absent comparing apples with apples. In the same vein, outcomes and procedures can be compared because they belong to the same group: the group of resources. However, distributive justice experiences and procedural justice experiences will be more accurately linked to each other when the outcome and procedure belong to the same resource class.

Allocation and Society

Resources have meaning for living beings, and allocation is a primordial activity: it relates to the survival of an individual living being as well as to that of the group (species). The survival urge finds its operation in self-directed allocation motivation (egoism) as well as in other-directed allocation motivation (altruism). In the evolution of the species of Australopithecus afarensis, and later on in *Homo sapiens*, these motivations have evolved into a more balanced allocation motivation: the justice motivation (see also Kameda, Takezawa, & Hastie, 2003). Moreover, in the homo branches (*Homo erectus*, *H. sapiens*), cognitive brain evolution has made the operation of these motivations more dependent on deliberate decision-making than in other primates.

The meaning human beings attribute to resources changes continually. An important change in meaning took place when they became domesticated and created villages and towns. In hunter-gatherer groups, the group of hunters who contributed much to the community was admired and was allowed to allocate more resources to themselves than those who contributed less: hunters versus not-hunters. Hunters who brought back a catch divided the best parts among the fellow hunters, while the rest of the group received the lesser parts. Hunters' status was the highest in the group, although the majority of the food (about 80 %) was gathered by the women, older people, and children. Fruits, tubers, and roots were less appreciated by the whole group than meat.

However, after domestication, production of corn and other types of grain became more important, while meat from what hunters brought in was replaced gradually by meat from domesticated animals. The status position of women rose as a result of the work around the house, the decoration of it, and the care for animals. The status position of males decreased, and they sought new ways to restore their lost status. They found it, among other things, by creating new activities, resulting in new professions, like blacksmith, resulting in more types of labor. And although women's status position increased, men's new status position increased even more. As a consequence, the creation of more goods resulted in the disproportionate wealth of a few people. Thus, status was more and more based on what a fellow human being possesses rather than on what that person contributes. This development was for Rousseau (1992) the reason to seek the inequality between men as a consequence of having property: When men established property as their own, inequality was born. In contrast, in my view, the

establishment of property was—in the domestic state—a way to differentiate oneself (the farmer as newcomer) on a solid basis from others, mainly the established hunter groups. However, in the course of time property was valued as commodity as such and people treated property as a goal on its own in stead of as a means to a goal (Vermunt, 2014).

The growing complexity of social relationships within the community was experienced like the physical environment once was (and is): as a limit-setting edifice (Elias, 1969). The created social and cultural beliefs, for instance about status and property, strongly influenced people's opinions and behaviors. However, changes in the physical (e.g., climate change) and social environment (e.g., migration), and through the appearance of new goods (iron plow, mobile phones) gave some people the opportunity to follow new ways of subsistence, bringing changes in the social structure and culture. Young people, among them young couples, use mobile (smart) phones faster than older people, and teach these skills to their children. Nowadays, youngsters teach their grand-parents to use (simple) smartphones. In a decade, the traditional idea that older people teach the young ones is put upside down. Moreover, opinions and attitudes about privacy—which information to communicate to whom—has been changed drastically.

Once settled, the newcomers (Elias, 1969) thus "force" the settled to change their behaviors about resource allocation rules and principles, and thus change the social edifice. Our ideas about what and how information can be exchanged through digital devices like smartphones, computers with cameras, has changed dramatically. Information that a decade ago was viewed as strictly private is now communicated (allocated) to strangers. There is nowadays ample discussion about sharing information, but it seems certain that societies' beliefs and attitudes about information allocation are changing. Parents and tutors instruct their children to use these alternative behaviors and attitudes to increase their children's status position, and their chances for a successful future. These learned behaviors become part of the individual's cognitive, emotional, and behavioral repertory. In addition, in the "knowledge society" the cleavage between the informed and the not-informed is increasing, resulting in greater inequality with regard to the social resource Information within a generation and between generations.

Inequality

The debate on material inequality in society is old and not settled. I need only to point to the recent discussion around the book of Thomas Piketty (2014) about the growing economic inequality; the work of Wilkinson and Picket (2009), showing the beneficial effects of small differences in income as compared to the less beneficial effects of large income differences; the work of Joseph Stiglitz, Nobel Prize winner, who describes in his recent book the detrimental effects of income differences on our future: The Price of inequality: How today's divided society endangers our future. Piketty states that the revenues from capital exceed the revenues from labor, affecting negatively the way in which profit is reinvested to create labor. The consequence is that the rich become richer and the poor poorer. According to the American economists Acemoglu and Robinson (2012), inequality

is not caused by wrong investments (capital versus labor) but is caused by the undemocratic distribution of scarce resources. In those countries in which scarce resources are in the hands of a small group, inequality is larger than when more groups of people have access to scarce resources. Wilkinson and Picket as well as Stiglitz (2013) describe the negative consequences of large differences between groups in material resources: Countries with large differences in material resources have a less healthy population, more teenage pregnancies, and other negative characteristics than countries with smaller differences.

Scientific hypotheses are set up to explain (in)equality, ideologies have been put forward to justify it, while policy makers, from a pragmatic point of view, take measures to affect (in)equality. There are periods and countries where (in)equality is more accepted than in others. Studies have revealed the history of (in)equality from archeological and anthropological findings.

Although we know much about (in)equality in society, the optimal degree of (in)equality is still subject of debate. Some findings suggest that the lower the inequality the more people are happy and healthy as Wilkinson and Picket show. These studies are correlational and often lack precision. But let us assume that the findings about a moderate inequality can be replicated; questions arise as to what is an acceptable inequality? Does moderate inequality count for all citizens or do we allow that some people are very poor and some are very rich? Is it acceptable, for instance, that 90 % of the population differs moderately in income while 5 % is very poor (very low income and no wealth) and 5 % very rich (very high income and huge wealth)?

It is important that a large part of the population has moderate differences in income: one of the reasons is that people of each income level have an accurate view of the next level up as well as of the next one down. This constellation motivates people to try to approach the next level and to distance themselves from the lower one. This upward–downward intention motivates people to move but also to keep the social network intact. The precise extent of the inequality is therefore of crucial significance to improve happiness and health in society.

What can be done if society will not accept the poverty of the lowest 5 % of the population nor the huge wealth of the highest 5 %. A solution in which the highest 5 % is allowed to earn that much in order to let the lowest 5 % receive a higher income does not work. The highest 5 % becomes dissatisfied about the, in their eyes, easy way people get income without effort, and intend to retreat their capital from the labor market. Some portion of the lowest 5 % is not challenged sufficiently to increase their efforts on the labor market.

To handle the two categories of people in an effective way, society must first realize that each of the categories—the poor and the rich—include people who differ in their propensity and ability to exert labor effort, respectively, the propensity to share their wealth.

Three types of actor can be distinguished to regulate the equality/inequality balance for social resources in society. For some countries, the oldest and often the most appropriate one is the state or government: the government is the institution representing the interests of the whole population, in theory at least, and can formulate a general accepted distribution rule and allocate resources accordingly,

resulting in high or low inequality. The other institution is the market: Distribution of social resources is based on their scarcity: demand and supply. Jobs regarded as scarce have higher revenues than less scarce jobs. A talented soccer, football, or basketball player earns a high income because his/her talent is (seen as) scarce. The third institution to allocate scarce resources is the community: the category of people that feels to have something in common. The community allocates resources according to the degree in which others are included in the community or contribute otherwise to societal development. Economists subsume these activities under the term "informal economy": business activities between citizens without (market) regulation or administrative interference. The informal economy is estimated to make up 9 % of the total economic activities in the US and 13 % in the Netherlands. Starting a new company is a private decision that originates not from governmental decisions, hardly from market experiences, but mainly to create for oneself and others a satisfactory environment. Government and market often jump in later.

If one of the institutions dominates it will result in disruptive allocation of social resources. The aim, therefore, should be to find an allocation system in which all three institutions in their own and complemented way are available and are allowed to allocate social resources.

Justice and Morality

People are motivated to do justice to self and others, and under influence-free conditions allocate resources (primary goods and civil liberties) equally between self and others (Rawls, 1971). But the waxing and waning of social relationships, and the operation of psychological forces affect the balance between self-directed allocation motivation and other-directed allocation motivation. An interesting example of how psychological forces disturb the operation of the justice motive and thus suggest the correctness of the theoretical idea is given by Darley and Batson's (1973) study about helping behavior. Participants were asked to read the story about the Good Samaritan and prepare for a presentation of the story. Walking to the designated building each participant was asked to help someone in distress. The results showed that 63 % of the participants who had ample time to reach the building on time were prepared to help the victim against only 10 % of the participants who had hardly time to reach the building on time. In our terms, participants were confronted with a conflict between self-directed tendency (delivering a good presentation: status) and other-directed tendency (helping other to improve this person's status: from distress to normal functioning). Participants in the ample time condition could find a balance between self-directed behavior (egoism) and other-directed behavior (altruism): being on time for the presentation as well as helping other could be achieved. In the short-time condition, the self-directed tendency took precedence over the other-directed tendency resulting in not helping the other person.

The imbalance (not helping in a stress situation) often results in unequal division of primary goods (in this example the primary good Status: allocating more status to self than to other) and civil liberties and is only morally acceptable (permissible) if

appropriate justifications are given and accepted with love and respect by all, or—less preferably—by a majority of the society (or group). Of course, the finding that 37 % of the participants did not help while being in a rather favorable situation points to the operation of other factors. Some participants may still feel a bit anxious, or underestimate the available time and hurry to the building. Data about the subject's evaluation of the available time are absent in the Darley and Batson study.

Even the division of important civil liberties like freedom of speech is under some conditions unequal, but acceptable. Institutions impose restrictions to people's freedom of movement for the sake of national security, like some agencies being allowed to infringe upon people's civil liberties. These institutions allocate more resources to self than to citizens, and people tend to accept that. When fear is imminent as in the state of nature, or in times of turmoil, group members are inclined to accept restrictions to their liberal rights. Even the institutions, mentioned earlier, often show fear reactions and consequently behave in a rather imbalanced way. Justifications in terms of protecting people's safety and integrity are often accepted.

Dedicated leaders with compassion are needed at all levels of the social edifice to make decisions reflecting appropriate moral rules, sometimes against prevailing moral intuitions. According to Barber (2013), mayors of large cities are par excellence suited to become leaders on a less than national scale. They are impartial, pragmatic persons with a problem solving mind.

Moral behavior is subsumed under just behavior and is primarily directed at equal status (respect) allocation between self (actor) and other (recipient): Treat others as you treat yourself. Unequal status allocation is only morally acceptable (permissible) if appropriate justifications are given and accepted with love and respect by all involved. Justice is primarily directed at equal allocation of all resources between self and other, as well as among others. Morality is defined here as the balance between allocating the resource status (respect) to the self as compared to the recipient resulting in equal status allocation.

Morality and justice, thus, have in common the allocation of a social resource. Morality is concerned with (reactions to) the allocation of Status, while justice is concerned with (reactions to) all social resources, showing the overlap between the two concepts. This overlap is visible in the justice literature. Evaluation in terms of just or unjust is used in the procedural justice theories even when an actor treats a recipient disrespectfully (status) by, for instance, asking inappropriate questions (Bies & Moag, 1986). One can also define this behavior as unethical because it affects the recipient's integrity or status. In addition, treating a recipient according to ethical rules (being concerned about the health of a person) is evaluated in terms of justice as well (Leventhal, 1980). Both terms, thus, can be used interchangeably concerning status. However, with regard to the allocation of money or goods, the actor, the recipient, and the observer evaluate the final outcome as fair or unfair, but not as ethical or unethical, as is the case of allocating money to a recipient in an ultimatum bargaining game. However, the term unethical is sometimes used when allocation of money is concerned. The egoistic bankers' very risky financial decisions affecting the lives of large groups of people were evaluated as unethical and not as unjust. Clearly, the severe impact of their behavior on the status of many people may have been decisive to define the behavior as unethical instead of unjust.

In the case of a dilemma such as whether to save someone's life or those of five others, the dilemma is defined as a moral one and not as a justice one. The evaluation of the dilemma in terms of morality in stead of justice is probably also derived from the fact that the dilemma concerns a life-and-death issue. A life-and-death issue is, in fact, a status issue with the severest implications. The question, is the allocation decision one of justice or morality, becomes more complicated when a medical treatment to save a patient's life is weighed against the costs of the treatment. Is an eventual treatment refusal a question of injustice (expensive service is not given), or is the decision an immoral one (the recipient's life can be saved but one does not do it)? How one defines the dilemma may be a question of perspective. The actor—for instance, the hospital—judges the issue as one of costs, and evaluates the very expensive treatment of this patient as unfair because it takes too much of the financial resources for the rescue of one person (status) probably at the expense of rescuing others. The hospital would say that the expensive treatment is unfair toward other patients in need who deserve treatment as well: the hospital makes a comparative judgment. The recipient and observers will be inclined to evaluate the hospital's decision as unethical because they refuse the necessary help for the patient: they emphasize that the patient's life is at stake —they make an absolute judgment. Both, the hospital as well as the patient and his/her social group can avoid a conflict by trying to take the perspective of the other. Negative effects of moral intuitions (Haidt & Joseph, 2007) and moral mandates (Skitka & Houston, 2001)—often expressions of the one-sided view—can then be reduced.

Psychological Forces

The individual actor is subject to internal forces—psychological ones—that distort the justice (morality) balance. The justice urge, developed as part of the new cortex, has to compete with urges in the older layers of the brain, among them the egoistic and altruistic urge.

A crucial psychological force is anxiety or fear caused by experience of physical and social changes. The physical substrate of anxiety and fear is deep hidden in the old layers of the brain and is a strong force guiding behavior. The anxiety takes the form of existential anxiety that each individual experiences and has a disturbing effect on fair allocation motivation and behavior. Moreover, cyclical fear, accompanying economic and social upheaval, can increase the already present existential anxiety. Fear caused by the presence of other group(s) also has disturbing effects on the balanced justice motivation. Intergroup fear reduces just allocations abruptly (Vermunt, 2014). There is abundant evidence that changes in the social relationships between people has dramatic effects on the allocation of resources. Well-known are the studies by Henry Tajfel, Billig, Bundy, and Flament (1971) about unequal resource allocation to members of another group as compared to the more equal allocation of resources to members of the group to which the participant feels to belong (through manipulation of group membership). While Tajfel and others focused on allocation of material resources (money) between self and own-group versus out-group other, Sole, Martin, and Hornstein (1975) investigated the

effects of attitude similarity on helping (Service). The study showed an abrupt and significant decline in helping behavior when attitude similarity dropped from little attitude similarity to zero attitude similarity as compared to the difference in helping between moderate attitude similarity to little attitude similarity. According to Turner (1981), unequal resource allocation is due to the person's motivation to overcome identity threat, released when the person is confronted with a member of another group.

Self-preservation (fear, happiness) as well as moral emotions (guilt, pride) are triggered during resource allocation processes, that is when the actor takes an allocation decision, and recipients and observers evaluate and react to the procedure and final outcome of the decision. The actor strives to reward himself/herself with positive self-preservation as well as with positive moral emotions. Anticipation of the experience of possible negative self-preservation and negative moral emotions alert the actor, recipient, and observer when taking an allocation decision. The Jewish Priest—in the parable of the Good Samaritan—who passes a person in distress may experience a dilemma between helping or not, and may justify his behavior considering that helping will lower his status position, and thus endangering his family, friends, and colleagues. This justification for not helping satisfies his self-preservation emotions (fear reduction) and his moral emotions (guilt reduction). However, it is the question whether others will accept the justification. Moreover, the Jewish priest can offer help by donating money or goods so that others can help the victim. In this way, the Jewish Priest does not need to use justifications, while satisfying his self-preservation emotions (no status loss) as well as his moral emotions (service is offered), thus doing good to self and other.

Thus, when a decision to make an unfair allocation decision is inevitable (or desired) the actor prevents or reduces experiences of negative self-preservation emotions like anxiety and unhappiness, and/or negative moral emotions like guilt and shame, by justifying the allocation decision. In case the justifications are accepted by recipients and observers, it may become the start of general applied moral behavior. Most research has been devoted to the effects of justifications on the recipients' justice evaluations of an undesirable or unfair allocation decision (Folger, 1977; Bies & Shapiro, 1988) or an observer's trait attribution for immoral behavior (Chadwick & Trafimov, 2005). In addition, a related concept is system-justification: The motivation of people to defend and justify the status quo, the existing social order, to satisfy the psychological need for order and stability (see, e.g., Jost, Banaji & Nosek, 2004). Thus, an actor in an allocation process may use justifications to mitigate an undesirable outcome for self, recipient (Bies & Shapiro, 1988), and observer or emphasize the relevance of the status quo for recipient and observer to make it acceptable or permissible to take the unfair or undesirable allocation decision. The question now is what the actor will feel and experience when using these ways to avoid a troubled consciousness and an unhappy mind in taking an unfair allocation decision. The actor probably ruminates about the justification that satisfies most his/her self-preservation needs as well as moral needs.

Actor's strivings for just allocation of resources is often blocked by internal (e.g., anxiety) or external forces (e.g., presence of out-group) and the struggle to be

now and in the future a decent person leaves traces in the neurological substrates of the brain. Appropriate scans of the brain can assess actor's neurological and psycho-physiological correlates of these strivings. Models about moral reasoning that unveil its neurological basis have been developed (Wolters & Vermunt, in preparation). An example of such a model is the event-feature-emotion-complex framework (Moll, Zahn, de Oliviera-Souza, Krueger & Grafman, 2005). In this model, it is assumed that moral cognition is controlled in the anterior prefrontal cortex (PFC) by integrating the present context and goals with information about functional social features (processed in the temporoparietal junction (TPJ) and parts of the temporal lobe), central motive states (processed in the insula), emotional responses (from the amygdala and ventral PFC), and prior experiences and knowledge.

Climate Change

There are strong indications that climate change was and still is a crucial condition for social, economic, and psychological changes. Scientists have related climate change in several periods in unwritten and written history to changes in the social edifice of society. But it is difficult to disentangle the several causes and effects of the changes: what caused what? Was the end of the Mayan culture around 800 A. D. a consequence of drought, as some scientists suggest, or was Mayan society already in such turmoil that drought could not be counteracted properly? Paavola and Adger (2006) note that populations that are already vulnerable for the consequences of climate change—rising sea levels at atolls in the Pacific Ocean already resulted in replacements of people, animals, and materials—need a fair compensation for the costs to settle anew, participation in planning, and decision-making for adaptation. Leaving these institutional support behind, the vulnerable populations will probably undergo the same fate as the Mayan people. Fair treatment—financial contribution in accordance with welfare and voice in the adaptation process— is necessary for righteous adaptation to climate change (Paavola & Adger, 2006). Clayton (2000) has pointed to the relevance of distributive justice and procedural justice for people's attitudes and behavior towards the natural environment.

The study of justice would gain in strength if an improved and better-tested model of the consequences of climate change could be used. Improving the model is feasible, in that contemporary society is confronted with climate change. The International Panel on Climate Change, in which climatologists from nearly all countries in the world are working together, has confirmed that all climate indicators point in the direction of irreversible changes in global temperature, rainfall, and weather. The present generations are the first in history having knowledge of climate change and has a theory of the causes and possible consequences.

We can already perceive alteration of attitudes and behaviors in relation to the climate: tendencies and policies for less energy consumption, more energy from sun and wind, and growing motivation to pay higher prices for green energy. I need not be specific, but it is clear that social, economic, and psychological changes occur in relation to climate change. To counteract the consequences of climate change effectively, governmental agencies and the public try to introduce new behaviors.

In the Introduction to "Environmental Justice" in the special issue of the Social Justice Research (2013, issue 3) devoted to this topic, Müller and Clayton state that humanity is faced with considerable challenges concerning the sustainability of lifestyles. The study of environmental justice started in the second half of the last century and coincided with the growing awareness of the limited reserves of natural resources, the pollution of the environment, and our excessive lifestyle. Starting as the beliefs and opinions of a small group of people, generally regarded as weird, it gradually became an issue that captured larger groups of people. Feelings of injustice, according to Müller and Clayton, often lay at the basis of environmental conflicts, for instance, about the distribution of natural resources. And protest against environmental decisions by institutions cannot properly be understood without studying justice related emotions. And these issues become more and more significant as new consequences of climate change are experienced by people of many countries.

Not only beliefs and attitudes concerning environmental issues change, allocation behavior is changing as well. More and more people are prepared to pay more for food and other products when they know that the production is climate friendly. Nations are (reluctantly) willing to help other nations to protect inhabitants from flooding caused by a rise of the sea level as an effect of rising global temperature. There are many initiatives to improve energy production and reduce energy loss during production, transportation, and consumption. These newcomers on the energy market invent new energy-saving devices and challenge the settled, who still continue to produce in the energy-consuming way. Justice beliefs may advance but also hinder acceptance and adoption of environmental policies to change people's behavior. Wojcik and Cislak (2013) found that people with the belief that nature is just, were willing to donate to projects to reduce the negative impact for nature but not willing to support victims of disasters. Feinberg and Willer (2011) showed that communicating dire consequences of climate change to people who believe that the world is a just, orderly, and stable place resulted in denying the existence of global warming and counteract measures to reduce it. However, these authors found that reframing pro-environmental issues in terms of purity—as a moral term—increased acceptance by conservatives and closed the gap in acceptance of environmental measures between them and liberals (Feinberg & Willer, 2013).

Alternative moral standards are developed prescribing how to treat animals and how to live alongside the natural environment. People are prepared to separately collect household garbage (plastics, paper, glass) to recycle and reuse. Moreover, some people, now, refuse to buy packed products by bringing their own packing material for continuous use. This behavior costs time and energy, but helps to reduce the mountain of waste if more people will follow it. And as these behaviors become more and more a general practice, it is increasingly viewed as unethical to waste products and to pollute the natural environment.

Are these actions in relation to the natural environment directly and solely due to climate change? Or were the behavioral and social changes already operative, and has the prospect of climate change only accelerated these processes? In my view, climate change has a pivotal role in human existence, its continuity, and change, as well as in the structure and culture of human relationships. Its influence on

allocation behavior and justice beliefs is inevitable (Vermunt, 2014). Theorizing and research in all these areas are of crucial importance for the fate of humanity. And I foresee a crucial role for the International Society of Justice Research in this endeavor.

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