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**Antecedents of immediate and memory-based  
perceptions of organizational justice**

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## Abstract

Antecedents of immediate and memory-based perceptions of organizational justice.

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In this dissertation, I explored how distributive, procedural and interactional facets of organizational justice combine to produce judgments of overall organizational fairness. In particular, I explored how a recalled event versus an immediate event is differently perceived and reacted to. I document several differences in the composition of overall fairness judgments depending on the timing of the judgment. Results and implications for organizational life are discussed.

**Keywords:** organizational justice, distributive justice, procedural justice, interactional justice, overall fairness, motivation, immediate and memory-based fairness perceptions.

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# 1. Introduction

## 1.1 The place of Organizational Justice in theories of work behavior (motivation)

People live in communities, and in any community social relationships involve a fundamental social dilemma: a person that belongs to a group should contribute personal capabilities for the common good and, has to trust the other community members in order to achieve goals that he could not accomplish alone. However this cooperative behavior can lead to exploitation, rejection and a loss of identity (Lind, 1994, 1995a, 1995b).

Employees work in organizations, which are their own communities. In organizational relationships, employees invest time, effort and energy to the common good, but there is a chance that their behavior will be exploited by others, for example when they do not receive the just outcome or else when the co-workers take more than they deserve.

An effective human resources management is intimately related to organizational effectiveness. Consequently, several questions must be answered by companies, and specifically by managers. One of the most important questions is: What are employees motivated by?

There are many definitions for *motivation*. In general, motivation is the combination of the individuals' persistence in the face of obstacles, goal orientation and passion to make effort toward attaining a goal (Robbins & Judge, 2007).

If an employee is not motivated, it does not imply he/she is lazy. Motivation drivers vary across individuals and also among different times and situations for the same individual. To encourage high-levels of motivation, managers should be sensitive to employees' differences since employees' perceptions are often influenced by their culture and emotional commitment.

Apart from the properties of the task and employee's abilities/ skills, motivation is an important determinant of performance. And, employees will not be motivated to exert a lot of effort and to perform at high-levels if they believe their performance will not be correctly and fairly assessed, and consequently they will not attain the outcomes they deserve.

In organizations, individuals need to collaborate. Employees are subject to decisions by the organization, which bring them positive and negative consequences, and heavily influence their reactions and attitudes. A relevant source of motivation for these employees is when the decisions, and the way they are implemented, are fair.

Thus, managerial decisions might possibly be improved by deepening the managerial understanding of what determines employee fairness judgments. However, jointly with justice-related events, it may be necessary to account for employees' personality and own characteristics to motivate them. For example, past research shows that different aspects of organizational justice matter to a different extent to employees that have different personalities or self-concepts (Colquitt, Scott, Judge, & Shaw, 2006; Johnson, Selenta, & Lord, 2006). Moreover it is important to recognize that the diversity create a healthy and complete workplace (Robbins & Judge, 2007), which also contributes to work motivation.

Motivation is the key for higher productivity, work-commitment and job satisfaction, so that theorists have been studying this concept and its consequences intensively. Different questions have been answered by numerous theories and complementary approaches about the origin and management of motivation in organizations.

### **1.1.1. Hierarchy of Needs Theory, Theory X and Theory Y and Two-factor Theory**

Need theories of motivation identify the needs that workers feel motivated to satisfy by holding a job. The Hierarchy of Needs Theory, by Maslow, is supported on the idea that as each need becomes considerably satisfied, the following need on the pyramid becomes a more important motivator of behavior (Maslow, 1943). There are five main needs on Maslow's pyramid starting with physiological need (e.g. hungry), followed by safety (e.g. the frequent employees' preference for a job with tenure and protection), then social (e.g. give and receive care from friends and co-workers), then esteem (e.g. receive respect and recognition from friends and co-workers) and finally self-actualization.

According to Maslow (1943), "in the human being who is missing everything in life in an extreme fashion, it is most likely that the major motivation would be the physiological needs rather than any others" (p.373). As long as the organism is dominated, and its behavior ordered by unsatisfied needs, after physiological needs be satisfied they become insignificant in the present behavior of the individual. This happens in each level of the pyramid, because once the previous need is satisfied, the next higher need emerges. It is important the employer knows which level of the pyramid a specific employee is presently at, since a considerably satisfied need is less relevant to employee's own motivation than a non-satisfied need.

Although this theory has become extremely important for organizational behavior, other theories of motivation have arisen, such as Theory X and Theory Y by Douglas McGregor, or the Two-factor Theory by Herzberg.

Theory X and Theory Y are based on two opposite views of human behavior at work and organizational life. Each one is organized according to a number of assumptions. For Theory X (negative view), managers tend to believe in the following: employees dislike work, have no ambition, avoid responsibility and must be coerced to perform and achieve goals. For Theory Y (positive view), managers tend to believe the opposite: employees like work, are innovative, seek responsibility, and can exercise self-direction and self-control. Based on Maslow's Hierarchy of Needs, McGregor grouped the hierarchy into lower-order needs (Theory X) and higher-order needs (Theory Y), which could be both used by managers to motivate employees, using a different managerial style. However, McGregor did believe that Theory Y assumptions would lead to more effective management, which in turn will lead to better results and employee motivation (Robbins & Judge, 2007).

Two-factor Theory (or motivation - hygiene theory) clearly separates the factors that lead to job satisfaction (motivators) from those that lead to job dissatisfaction (hygiene factors). Herzberg considers that eliminating hygiene factors (extrinsic factors – e.g. working conditions) that lead to dissatisfaction does not create any motivation. Instead, he believes that the intrinsic factors (e.g. recognition) are the true motivators, and create job satisfaction.

In most cases, these early theories of motivation were important because they set the stage for more recent theories. Contemporary Theories of Motivation are based on the same system of basic human needs, which were expanded and elaborated to a greater extent.

### **1.1.2. Contemporary Theories of Motivation**

There are a set of theories, considered as contemporary theories of motivation, that represent the way scientific community examine employee motivation both theoretically and empirically.

The McClelland's Theory of Needs states that employees' motivation is explained, and guided, by three important needs: achievement (e.g. striving to succeed, a drive to excel), power (e.g. being influential, control others) and affiliation (e.g. developing close and friendly interpersonal relationships). Different employees find different types of these needs to be more significant and motivating. According to Cognitive Evaluation Theory, employees that try to attain goals by intrinsic reasons are more satisfied with work and organization. If

managers allocate extrinsic rewards to employees that were previously intrinsically rewarded, they tend to decrease employees' overall level of motivation. Thus, in addition to extrinsic incentives, employers should provide an interesting work to their employees providing feedback and opportunities for personal development, to increase employees' intrinsic rewards.

For Skinner (1953), in Reinforcement Theory, behaviors are a function of their consequences. This theory focuses on what happens to a person if some action was taken. Individuals' behavior with positive consequences tends to be repeated, whereas individual's behavior with negative consequences tends to be not repeated. So that, the best way to motivate employees is to guarantee positive changes in the external environment of the organization.

Different strategies can be taken to control employees' behavior. Positive reinforcement implies giving a positive response when an individual shows a valued behavior whereas negative reinforcement implies rewarding an employee by removing negative consequences. Both reinforcements increase the probability of positive behavior occurs again. Individuals are motivated when behaviors are reinforced. Another to strategies are punishment, which implies removing positive consequences, and extinction, which implies absence of reinforcements. These both strategies are applied in order to reduce the occurrence of the undesired behavior.

Also Locke (1968), in Goal-setting Theory, considers that challenging goals combined with feedback have a direct impact on an individual's performance of a task. Difficult and specific goals lead to higher performance and harder work. For example, some companies establish almost unattainable goals to force workers to give their best.

Another perspective yet is the Expectancy Theory (Vroom, 1964), which defends that an employee acts in a specific way anchored in the expectation that a given behavior will lead to a certain outcome, which is attractive to him. Expectancy theory has three main dimensions – valence (the value of expected rewards to an employee), expectancy (perceived likelihood that the effort will lead to expected performance, according to what employees are capable to do), and instrumentality (the belief that the performance will lead to the desired rewards), which combined lead to motivation. Employers should understand what employees value, what sources employees need, and guarantee that the promised rewards are attainable, according to exerted effort.

### **1.1.3. The Equity Theory and the Organizational Justice Theory**

Justice is a compound and multifaceted phenomenon, driven by complex reasons. Across time, it has been shown to have a consistent position in people's concerns, which have been featured in many dimensions of society, such as political power, voting systems or equality of sexes. Famous personalities from the whole world have talked about justice as the driving force for society, "A republic cannot succeed till it contains a certain body of men imbued with the principles of justice and honor." (Charles Darwin, 1839), and about the consequences that justice can exert on human attitudes, behaviors and relationships, "If [justice] is removed, the great, the immense fabric of human society [...] must in a moment crumble into atoms." (Adam Smith, 1759).

In the business context, over the last 4 decades, employers, employees and theorists have introduced justice to organizational theory and have started to become aware of the impact of justice on the daily organizational life and on attitudes and behaviors in work settings. In much of this research, scholars take the perspective of the receiver of fair or unfair treatment rather than the perspective of the person who acts fairly or unfairly towards others.

The Equity Theory by Adams (1965), has been the basis to thinking about Organizational Justice. It states that motivation is highest when individuals perceive that equity exists, i.e. when outcomes are distributed to workers on the basis of their contribution to the organization.

Individuals decide if they have been treated fairly based on comparisons. If the ratio of individual's inputs (e.g. effort, dedication) used to achieve their outcomes (e.g. pay, development opportunities) is different from the ratio of inputs to outcomes of relevant others, they perceive injustice. For example, if the employee put the same amount of effort as the other employee, but the other employee has received a more favorable outcome, the employee perceives the received outcome as unfair.

Equity is certainly subjective, since it resides in the perception of the person. However, these subjective perceptions of inequity lead to tangible results for the organization. If employees perceive the relationship between inputs they bring to job and achieved outcomes to be low, this generates low motivation, low efficiency and higher absenteeism (Robbins & Judge, 2007).

Recently new and integrative theories of organizational justice were developed. Folger (1986b) introduced the notion of referent cognitions, as the feelings of anger and resentment supported by counterfactual reasoning of "what might have been". These feelings are worse when the opportunity cost is high, the likelihood of future better outcomes is low and justification is low. After referent cognitions theory, Folger and Cropanzano (1998, 2001)

explained in which case an authority is considered accountable for an injustice. Fairness theory (justice as accountability) states that if it is not possible to blame someone, there is no social injustice. This last theory is based on three components: would (injury, referent standards), could (the individual was not free to exercise choice), should (moral and ethic tenets). When judging an event, individuals must consider some variables: the adversity of the situation, the actions of the responsible for the situation, and the moral code must be compared with scenarios of what would, could, and should have happened.

Some other models were focused on groups and its importance for individuals, as the group value model (Lind & Tyler, 1988) or the relational model (Lind & Tyler, 1992). Lind (2001), and Van den Bos and colleagues (2001) came up with two other theories: fairness heuristic theory, which reflects about “the causes, effects and dynamics of justice judgments” (Lind, 2001, p.56), and uncertainty management theory, which defends that justice manipulations are stronger in the presence of uncertainty. Fairness heuristic theory refers the fundamental social dilemma – the two sides of contributing with personal inputs to a social entity, because it may facilitate the achievement of outcomes and other goals but there is a risk of exploitation. According to this theory, yet, the information received first has more impact than the information that comes later.

In a more recent study, Cropanzano, Byrne, Bobocel, and Rupp (2001) answered to three main questions, in order to better understand organizational justice: (1) How do people form perceptions of organizational Justice? (2) Why do people care about organizational justice? (3) What is organizational justice?

For these researchers, “if justice is seen as a kind of motivational phenomenon” (p.166), it is important to look at existent theories of motivation. The answer to the question of why people care about justice is given by different approaches to the study of organizational justice to date: the instrumental model (justice is important because of economic reasons – beneficial outcomes in the long run), the group-value/ relational model (justice is important because of social concerns – fairness transmits esteem and value within a group), and the moral virtues model (justice is important because people care about human dignity and worth). These theories can be shown to be complimentary or apply to a different extent in different domains.

Cropanzano, Byrne, Bobocel, and Rupp (2001) came up with an integrative model based on the three referred theories and the multiple needs model, by Williams (1997), who states that individuals have interrelated psychological needs. The interrelationships among

control, belonging, self-esteem and meaningful existence (the Williams' four needs) make justice to have both direct and indirect effects on each need.

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Insert Figure 1  
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Figure 1 represents the multiple needs model of organizational justice, integrated with the instrumental, relational and moral virtues model.

The need for control is in the long run a desire for economic benefits, and then a manifestation of instrumental model, because control allows individuals predict future outcomes. The need for belonging is the need of being close to others, and it is a manifestation of relational model, since justice brings people closer together ensuring close interpersonal relations. Also, the need for self-regard is a manifestation of the relational model, as it is the search for a positive view of the self. Finally, the need for meaning is the desire of individuals to be moral actors in a fairness environment.

In order to explain why workers are concerned with organizational justice, both early and contemporary theories of motivation, albeit structurally different, share the same ideal basis. Thus, it is not surprising that justice can play an important role in the effective functioning of organizations and the satisfaction of its members. Organizational justice theory defends that workers should receive outputs accordingly to the contributed inputs, must perceive that fair procedures will be used to distribute outcomes in the organization and that they will be treated fairly and respectfully by managers, in a manner they will be motivated and contribute with their best inputs. It clarifies both why people are concerned about justice and how people act in response to (un)fair situations (Robbins & Judge, 2007).

How do supervisors and organizations motivate employees and maintain their perception of fairness? Some answers are performance-based pay systems, sharing information with employees, promoting voice inside the company, applying satisfaction surveys, or treating the team sensitively, with respect and dignity, or keeping an "open door" policy, inviting employees to freely express their ideas and worries. Performance feedback should be delivered sensitively, explaining the basis for the evaluation of each member of the team and what employees can do to raise it (Greenberg & Baron, 2007).

Employee reactions to specific events depend on how fair they perceive these events to be rather than how fair they actually are. The fair treatment makes people motivated and

establishes a good relationship among workers, supervisors and the whole organization. According to the social exchange model, workers who recognize that the organization is supporting them are more likely to support the organization through organizational citizenship behaviors (Gilliland & Chan, 2001). Basically, employees reply to the behavior of others with equivalent behavior of their own.

There is a set of attitudes and behaviors that individuals can assume to respond to perceptions of inequity and unfairness. From the point of view of the organization, these reactions can either be positive – the individual may make an adjustment that leads to working even harder, and to have cooperative and prosocial behaviors – or negative – he may retaliate against the organization. According to Johnson, Selenta, & Lord (2006), some examples of those attitudes and behaviors developed by workers in the organization are citizenship and counterproductive behaviors – behaviors that violate norms and values (Greenberg, 1990; Skarlicki & Folger, 1997); job dissatisfaction and unfavorable evaluation of supervisor (McFarlin & Sweeny, 1992); less organizational and affective commitment (Masterson, Lewis, Goldman, & Taylor, 2000); withdrawal, turnover and absenteeism (Dittrich & Carrell, 1979), and others. Withdrawal and job satisfaction have a negative correlation because satisfied and committed employees have less feelings of absenteeism and withdrawal behaviors. For instance, according to Konovsky (2000), emotional reactions to fair procedures are reflected in organizational commitment and organizational citizenship behaviors.

## **1.2. Determinants of Organizational Justice**

Organizational justice, according to Colquitt (2001), Colquitt, Greenberg and Zapata-Phelan (2005), and Gilliland and Chan (2001), explains the impact of overall perception of justice on organizational life, is a determinant of employee motivation, attitudes, decisions, and behaviors, and leads to more intrinsic motivation. Managers' efforts to motivate employees will be insufficient if they behave in a certain way that does not satisfy the different types of justice criteria. Therefore, according to Organizational Justice theory, motivation requires a multidimensional justice perspective.

When we examine the effects of organizational justice and measure its facets, we must remember three basic rules: people compare themselves with reference standards, they manage expectations (if fairness derives also from the subjectivity of employees' inputs/

expectations) and they distinguish between (un)favorable and (un)fair results (Cropanzano & Greenberg, 1997).

The fast development of new theories and concepts has obliged theorists to build up a construct clarification. Colquitt (2001) came up with a legitimate construct of the justice measure. Based on Greenberg's ideas, Colquitt supports that the possibility that justice concepts are context specific can be a reason to explain how important it is to have a standardized justice measure, which remains useful and trustful across a multiplicity of contexts, in order to avoid incorrectness and to continue the investigation on organizational justice field.

Colquitt (2001) tried to consolidate all the theories and points of view from the existing literature about the structure of organizational justice to predict the validation of a model with four distinct dimensions, each one with diverse measure items. The scales he used guarantee good internal reliability, so that it becomes possible to statistically separate the different constructs.

In my analysis, I am going to consider the four main facets of organizational justice: distributive justice, procedural justice, interpersonal justice and informational justice. However, I have grouped the last two in just one facet: interactional justice.

Each of these facet-specific justice perceptions has its own impact on employees' perception of what justice is and how it can affect their organizational lives.

### **1.2.1. Distributive Justice**

In the seventies, distributive justice became an important element in social sciences research. Starting with Adams (1965), and followed by Deutsch (1975) and Leventhal (1976), theorists were focused on the justice of decision outcomes.

In the organizational social exchange process, where employees exchange time and effort for wage and other compensations, employees want to be fairly paid and recognized by their contribution to the organization. Employees expect a just rate of return for the exchange. The research on distributive justice is based on Adam's (1965) equity rule. Distributive justice exists if the allocation of an outcome is consistent with the goals of a certain situation so that rewards are distributed in accordance with employees' contributions, anchored in equity norms. Distributive justice captures employees' positive perceptions when pay, promotions and desirable working conditions are attained.

According to Adams (1965), workers make comparisons among themselves about their performances and contributions – inputs (e.g. effort, acquaintance, competence, skills, accurate behavior) and received rewards – outcomes (e.g. wage, recognition, promotions, training, affection). It is considered that equity exists if the perceived ratio of employee's inputs versus his outcomes is the same as those ratios that the employee perceives from relevant others – co-workers, or employees that develop the same functions - (interpersonal comparison) and from himself in another point in time (intrapersonal comparison). If the ratio is different, it means that even if the employee exerts the same amount of effort than another employee, the other one is receiving a better outcome. Thus, motivation is influenced not only by employees' own rewards now but also by others' rewards, and by own rewards in the past.

If perceived inequity exists, employees can react in different ways, against their supervisor or organization, decreasing their performance or else change the object of comparison (deny the inequality, reducing unpleasant feeling). Inequity leads to demotivation and, subsequently, to negative emotions, which people try to minimize by altering their inputs (effort and skills) or outcomes (Gilliland & Chan, 2001). According to Adams' studies, when employee's ratio input/output is unequal to the ratio of a relevant other, motivation is low. The over-benefited side tends to feel guilty and the under-benefited side tends to feel angry (Folger & Cropanzano, 1998).

Colquitt (2001) supported the correlation between instrumentality as the perceived linkage between high task performance and valued outcomes, and distributive justice. Both connect performance with outcome contingencies.

Relating Expectancy Theory to Organizational Justice Theory, distributive justice can be defined as a matching of expectations, based on employee's effort, with the actual outcomes. For example, at school, students' perceived fairness is higher when actual test scores match the expected test scores, according to the study involved and students' correct answers. (Gilliland & Chan, 2001).

Kirkman, Shapiro, Novelli and Brett (1996), referred some examples of team-work, performance, and the barriers for a successful implementation of teams, that consequently lead to employee's lack of motivation. An example of organizational injustice in the context of teamwork (distributive injustice) is the information asymmetry, which can be compared to the free-riding<sup>1</sup> problem in public economics. On one hand, employees are afraid of loose

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<sup>1</sup> The concept of free-riding is frequently used in political and public economics. The free rider is a person who wants to enjoy the external benefits of a public good or service without paying for it, since it is financed by others (Hyman, 1999). All of the individual members of a group can benefit from the efforts of each member in the construction of the output, but free riders take more than their fair share of the benefits.

their individual recognition, since the final output is presented by the team. On the other hand, if the employee compensation is based on team performance and its final results, employees will certainly compare how hard they, versus peers, worked for the same goal. If employees perceive that they worked harder than their team mates, but receive equal pay, they will probably perceive pay inequity, and thus decrease their motivation. These problems worsen when the team is larger.

### **1.2.2. Procedural Justice**

More recent work has showed that the fairness of the outcome and the process that leads to the outcome are independent; besides the norms of outcome allocation, procedures (methods, mechanisms and processes) also become important. Overall justice is perceived when the outcomes are fair, but also when the way they are received is fair.

Employees will be more dissatisfied with a low outcome, when it results from an unfair procedure. “The key requirement for procedural justice is the optimal distribution of control” (Thibaut & Walker, 1975). They studied the procedural justice of two kinds: process control (having voice during decisions/allocation rationale) and decision control (e.g. the aptitude to influence the outcome itself), whereas the approach of Leventhal (1980) for procedural justice emphasized several other aspects, whose violation implies procedural injustice. Leventhal (1976b) became aware that the equity theory unsuccessfully addressed the issues of procedural justice identified by Thibaut and Walker (1975), and defined the procedural rule as the individual’s perception of fairness in the criteria used to reach/allocate a particular outcome. The procedures adopted should satisfy some ideal standards, which are considered to be the rules for fair procedures: consistency (across persons and time), bias suppression (neutral decision-makers and no preconceptions), accuracy (valid information), correctability, representation (all subgroups are heard) and ethicality; and it implies that the outcome is formed according to one’s inputs (Leventhal, 1980).

Procedural justice is about how and which procedures were taken to conduct the evaluation of performance levels and to distributed outcomes. Folger et al. (1979) noted that individuals perceive procedures to be fairer when they had voice in the decisions, given that it is an opportunity for all the affected individuals to express their views to the relevant decision-makers.

Some examples of perceived procedural justice are the simple fact that, previously to the attribution of the annual monetary prize, the supervisor had called a meeting with each

employee, where they discussed his/her self-evaluation and the process of the attribution of the prize to the best employee (Konovsky, 2000).

A frequent adjustment during an organizational merger is laying off employees. This group is less likely to speak negatively about their companies if the formal procedures used to determine layoffs were procedurally fair as well as if some assistance in finding a new job was provided.

On the one hand, instrumental models, such as the self-interest model, consider procedural justice as a mean, and argue that the interest in fair procedures is the result of a conviction that fair procedures lead to best outcomes (Konovsky, 2000). On the other hand, based on Fairness Heuristic Theory (Lind, 2001), people refer to the fairness of authority's procedures to determine the authority's trustworthiness. According to the same theory, when the information about procedures is previously available, than the information about outcomes, procedural information will influence fairness judgments more deeply.

For theorists (Robbins & Judge, 2007) job satisfaction can be defined as a positive feeling about one's job resulting from an evaluation of its characteristics. In a very large survey made in the US, Alexander and Ruderman (1987) demonstrated that both procedural justice and distributive justice perceptions were correlated with job satisfaction, evaluations of supervisors, trust in management, and intentions to turnover.

In addition, supported by Lind and Tyler (1988; 1992), procedural justice is significantly important to employees' motivation in complying with the policies and decisions of the organization.

### **1.2.3. Interactional Justice**

Bies and Moag (1986) noted that the way procedures are implemented is also extremely important to overall perceived fairness. Initially, they argued that the interpersonal part of decision procedures has been ignored or confounded by previous research, and defined another dimension of organizational justice - the interactional justice - as the interpersonal treatment employees receive when decisions are deliberated and processes are enacted. The researchers considered that interactional justice was conceptually different from the structuring of procedures, and defined four criteria for it: justification, truthfulness, respect and propriety. Greenberg (1990a) came up with more components and linked them with previous research. He developed the previous criteria into two dimensions: explanations and sensitivity, which revealed independent effects from one another. Subsequently, Greenberg

(1993b) introduced and expanded the concepts of interpersonal – treatment of individuals with dignity and respect - and informational justice – understandable and appropriate explanations and justifications.

It is important to properly discriminate principles of procedural justice and interpersonal justice to understand and recognize the difference between them, in varied situations. Bies and Moag's (1986), as Colquitt (2001) referred, defend that interpersonal justice is perceived in response to decision-making agents (e.g. one's supervisor) and procedural justice is perceived in response to decision-making systems (e.g. the organization itself).

Employees are likely to perceive informational justice, when the decisions and the procedures used are explained to employees by managers. According do Colquitt (2001), Shapiro et al (1994) helped the construction of informational justice facet, adding that explanations should be reasonable, timely and specific.

Insufficient, poor and unacceptable explanations cause, over employees, a perception of informative injustice, which is attributed to the decision-maker/supervisor. For example, if the decision-maker provides explanations for a pay freeze to his employees, it may decrease the associated negative effects over their behavior, as turnover intentions, dissatisfaction, and lack of organizational commitment (Konovsky, 2000). A good practice for perceived informational justice is to explain outcomes using a lot of details (Greenberg & Baron, 2007). Additionally, information communicated verbally, instead of in writing, is more effective in enhancing fairness perceptions.

Distributive injustice is the most complicated judgment to attribute responsibility and blame for because employees cannot be sure about who decided their actual outcomes. Next in difficulty of attributing blame is procedural injustice and, at last, interactional justice, which is the easiest judgment to make (Folger & Cropanzano, 2001). An interactionally unfair event is mainly attributed to a specific person, for example the supervisor.

Briefly and based on Colquitt (2001) measures, it is possible to link each justice facet to specific positive behaviors, if the employees are motivated. For instance, distributive justice is related to positive person-centered evaluations, such as outcome satisfaction and instrumentality. Procedural justice is associated with positive evaluation of system and the organization. Some consequences of fair procedures are rule compliance, the adherence to the guidelines that govern a system or collective, and group commitment (group effectiveness), the extent to which a team member accepts team goals and identifies with the team. Interpersonal justice is linked to leader evaluation and helping behavior (VanDyne & LePine

1998), the proactive behavior that emphasizes acts of consideration. The social exchange model proposes that people expect some future unspecified return of relationships based on trust. Finally, informational justice is related to collective esteem, the sense of inclusion in key decisions, and trustworthiness.

There exist several studies over facet-specific justice perceptions. On one hand, other construct clarifications, apart from Colquitt studies, are particularly focused on the independence of procedural and interactional justice. Some consider that procedural justice and interactional justice belong to the same dimension, given that procedural justice gather the structural and the social aspects of procedures (e.g. Lind and Tyler, 1988). On the other hand, some are concerned with the distinction between interpersonal justice as the one related to respect and sensible treatment (e.g. being polite and respecting people's rights), and informational justice, as the one related to the provision of true and specific explanations and justifications, as described in Colquitt (2001), Greenberg and Zapata-Phelan (2005). For this study I will consider them together, as interactional justice.

### **1.3. The role of memory**

Researchers already know that positive perceptions of justice events lead to cooperative and prosocial behaviors, whereas negative perceptions lead to self-serving or antisocial behaviors (Lind, 2001).

However, do people judge and react to events always in the same way? Perceptions of organizational injustice depend on the specific situation, and the person itself and his/her personality, but they may also be a function of the passage of time, specifically subject to the effect of memory. Memory-based perceptions from an event occurred in the past can be more intense, or not, and the way people react to the event can be dissimilar from immediate perceptions.

Time is an important determinant of overall fairness judgments. There are several examples in the literature that consider time. The primacy effect in justice judgments (fairness heuristic theory) suggests that the fairness judgments will be formed quickly, with the first significant information exercising the biggest influence on perceptions of overall organizational justice. Early information concerning justice would have a stronger impact on overall fairness judgments than later information, because the first one is used to form a fair heuristic; then, when the distributive justice information is accessible before procedural justice information, the distributive justice is more preponderant in overall fairness

judgments. The organization should provide all the positive justice experiences they can early in a person's experience with the organization, supervisor or co-workers (Lind, 2001). Van den Bos et al. (1997) concluded that what people judge to be fair is more strongly influenced by early information than by later information.

Also, thinking about temporal distance can affect the present perceptions of fair or unfair treatment. Along with recalled past, also anticipated future has an important impact on people's reactions. Shapiro and Kirkman (2001) stated that future injustice can be anticipated, resulting on negative work-related attitudes and behaviors.

In previous studies, the role of memory was not visibly reflected. However, are the effects of immediate or memory-based perceptions of an unfair event actually equal? I am going to follow the existent theory, and to propose that the perception and evaluation of unjust events are not affected by the passage of time. I will be testing the evaluation of (un)fairness at the time of the event (immediate perceptions) and one month after the event (memory-based perceptions). The results could help managing fairness perceptions in the workplace.

As detailed later, a few other studies considered that unfair treatment is immediately perceived by employees, but, when recalled, it is perceived and evaluated once again. Over this reevaluation, some different reactions and consequences may emerge. People can react to an unfair event long time after the same event occurs, and further, they can accumulate feelings over time, that could be different from their immediate feelings.

## **2. Research Hypotheses**

First of all I will be testing the general effects of facet-specific organizational justice perceptions on the perceptions of overall organizational justice in immediate experience. Will all organizational justice facets contribute to these perceptions? I hypothesized that distributive, procedural and interactional justice perceptions relate positively to overall justice perceptions in immediate experience.

*Hypothesis 1 – Perceived fairness of work outcomes will relate positively to overall justice perceptions in immediate experience.*

*Hypothesis 2 – Perceived fairness of work procedures will relate positively to overall justice perceptions in immediate experience.*

*Hypothesis 3 – Perceived fairness of work interactions will relate positively to overall justice perceptions in immediate experience.*

Moreover, will individuals in delayed period be more sensitive, for example, to distributive justice? Or else, are all the effects on overall fairness judgments stable over time? In fact, current organizational justice measures do not distinguish between immediate and memory-based evaluations of fairness, ignoring how the passage of time affects the facet-specific organizational justice perceptions. Particularly, Colquitt (2001) in his extensive analysis pointed out some ideas and weaknesses from past research, but he neglected the memory effects. This author considered the existence of cultural and gender differences when an individual evaluates unfair events, but did not directly consider the role of memory. Therefore, I will follow his studies and consider that the passage of time does not affect justice perceptions, so that the contribution of distributive, procedural and interactional justice, the facet-specific justice perceptions, on overall justice is stable over time.

*Hypothesis 4 – The effects of distributive, procedural and interactional justice on overall justice will be stable over time (i.e., in immediate vs. delayed evaluations of events).*

I am going to examine whether specific facets of justice perceptions are more salient (more predictive of overall justice perceptions) in different time periods, first in an immediate period and secondly in a delayed period.

Although no current measures weigh the role of memory as an important variable to take into account, a few recent studies explored this question. By way of example, Cojuharenco, Patient, & Bashshur (2011) addressed the question: how the effects of unfair events develop over time. One goal was to understand how memory can affect fairness aspects that are central to the perception of overall fairness. The authors explained that memory is based on episodic memory, which stores information of actual events and experiences, and semantic memory, which stores the beliefs about different situations (Robison & Clore, 2002a, 2002b). Retrospective judgments are influenced by both episodic and semantic memory, each one having its own impact depending on the time distance from the event. If the experience is more recent, the episodic memory is less deteriorated and the specific details of the experience are clearer. Then the judgments will to a greater extent be based on the actual experience, and depend less on semantic memory.

According to the Construal Level Theory (Trope & Liberman, 2003), psychological distance affects mental construal of events, and subsequently may affect prediction, evaluation and behavior. Psychological distance leads to a high construal level (schematic,

decontextualized representations that extract the general picture from the available information), whereas psychological proximity leads to a low construal level (unstructured, contextualized representations that include specific and secondary features of events), (Liberman & Trope, 2008). Based on this theory, Cojuharenco, Patient, & Bashshur (2011) related psychological distance to different temporal perspectives. Temporal perspectives were defined as consisting of two elements: temporal orientation (past vs future) and temporal distance (near vs distant). The authors considered, for example, that events that are temporally more distant are also more psychologically distant, and are more likely to be evaluated by general aspects rather than concrete ones.

Cojuharenco, Patient, & Bashshur (2011) focus on the mental representation of the employment relationship. They argue that when psychological distance is great, distributive aspects will be more salient in fairness judgments because it is a prototypical high-level aspect of the employment relationship. So, when individuals consider temporally distant horizons and psychological distance is greater, distributive justice will matter more. However, when individuals consider present-focused timeframes, psychological distance is smaller, and interactional justice will become more prominent. Thus, an alternative to H<sub>4</sub> might be that the effects of facet-specific justice perceptions differ over time, as temporal distance increases between the individual and the event he or she focuses on.

### **3. Method**

#### **3.1. Participants**

The sample used on this research consisted of undergraduate students recruited from one of the management courses at a Portuguese business school. In total there were 193 students providing key information, and answering at least one questionnaire (among the 3 questionnaires used in this research) for extra credit. However, only 67 participants (35% of the initial sample) completed the surveys correctly. These students have produced usable answers, responding to all questionnaires required.

Fifty-five percent of the sample corresponds to female students, and 19,9 years old (SD=1,17) is the mean age. Only 7% of the respondents are non-Portuguese.

In spite of the majority of the students (70,7%) having no work experience, the respondents have 2 months of tenure (SD=6,4), on average. Participants who have been employed had mainly worked for short periods of time, ranging from shop assistants and accountants to call-center workers and summer camp monitors.

### **3.2. Procedure**

Participants in the study were asked to fill out three different anonymous questionnaires in three distinct times, which could be matched through the pseudonyms students chose and used consistently across all answers. Each respondent was asked to complete the questionnaires using fixed response scales as well as open-ended questions, with no time limit.

Firstly, participants completed an on-line survey about their own intrinsic aspects and socio-demographic variables. Self-concept (self-concept scale from Selenta & Lord 2005), personality traits and attitudes (ranging from respect to risk taking) and a few other scales were measured. The main importance of this first questionnaire for this study resided in the socio-demographic variables, used as control variables.

Secondly, students watched the first episode of the series “The Office”, during class time, and then answered the second questionnaire of the study. The synopsis on the pilot episode can be found on Appendix A. In short, the pilot episode features instances of all types of injustice, distributive, procedural and interactional. The measures, listed below, were used to capture their perception of fairness, their views, attitudes and emotions, according to what they had watched. At the end, one month later, students submitted an on-line questionnaire, the third one, where they were asked to answer the same questions by means of recalling the episode.

In order to understand how the passage of time can affect perceptions of overall organizational justice, the most relevant information taken from questionnaires were the scales related to facet-specific justice perceptions and overall justice perceptions, based on unfair situations occurred in the episode, when evaluations were immediate versus delayed.

### **3.3. Measures**

In the questionnaires, respondents had to answer the questions about facet-specific organizational justice perceptions, overall justice perceptions and demographics, according to

specific scales. According to Gilliland and Chan (2001), domain specific scales items require the respondents to indicate their fairness perceptions in a specific context, domain of interest or a specific aspect of the work environment. For this study, respondents were asked to answer specific questions imagining that their workplace is “The Office”.

### 1. *Facet-specific organizational justice perceptions*

Based on Colquitt’s research, this study considers three facets of justice. The distributive justice perceptions, the procedural justice perceptions and the interactional justice perceptions were measured using four items each, and the participants responded using a Likert scale ranging from 1 “not at all” to 5 “completely”.

The overall justice perceptions were measured using four items, and the participants responded using a Likert scale ranging from 1 “I absolutely disagree” to 7 “I absolutely agree”.

#### - *Distributive justice perceptions*

The *distributive justice* was measured by four items and it is the justice of decision outcomes, which measures the perceptions of equity in outcome allocation.

The items used to measure *distributive justice* were: “Do your outcomes reflect the effort you have put into your work?”, or the memory-based version “Did your outcomes reflect the effort you have put into your work?”, “Are/Were your outcomes appropriate for the work you have completed?”, “Do/Did your outcomes reflect what you have contributed to the organization?” and “Are/Were your outcomes justified, given your performance?” (Cronbach  $\alpha_{\text{time1}}=.87$ , Cronbach  $\alpha_{\text{time2}}=.93$ ).

#### - *Procedural justice perceptions*

The *procedural justice* was also measured using four items and it is the justice of the processes used to come up with the decision outcomes.

The items used to measure *procedural justice* were: “Have you been able to express your views and feelings during these procedures?”, or the memory-based version “Had you been able to express your views and feeling during these procedures?”, “Have/Had you had influences over the outcomes of these procedures?”, “Have/Had these procedures been

applied consistently?”, and “Have/Had these procedures been free of bias?” (Cronbach  $\alpha_{\text{time1}}=.76$ , Cronbach  $\alpha_{\text{time2}}=.76$ ).

- *Interactional justice perceptions*

*Interactional justice* construct joins both *interpersonal justice* and *informative justice* since they were most significant together, according to the principal components test (factor analysis). It was measured using eight items and is the way respondents feel treated, with respect and dignity, and feel clarified about facts.

For *interpersonal justice*, the items were: “Are you treated in a polite manner?”, or the memory-based version “Were you treated in a polite manner?”, “Are/Were you treated with dignity?”, “Are/Were you treated with respect?”, and “Do/Did people refrain from improper remarks or comments?”.

For *informational justice*, the items were: “Are/Were people straightforward in their communications with you?” or the memory-based version “Were people straightforward in their communications with you?”, “Are/Were procedures explained thoroughly?”, “Are/Were the explanations regarding procedures reasonable?”, and “Are/Were details communicated in a timely manner?” (Cronbach  $\alpha_{\text{time1}}=.85$ , Cronbach  $\alpha_{\text{time2}}=.91$ ).

2. *Overall justice perceptions*

Immediate and delayed *Overall justice* judgments were measured using a 4 items scale adapted from Ambrose and Schminke (2008): “Usually, the way things work in this organization are not fair”, or the memory-based version “Usually, the way things worked in this organization are/were not fair”, “For the most part, this organization treats/treated its employees fairly.”, “In general, I can/could count on this organization to be fair.”, and “Most of the people who work here/there would say they are often treated unfairly”.

3. *Demographics*

Gender, age, months of work experience, average grade, nationality and religion were measured via self-report, on the first questionnaire.

## 4. Results

### 4.1. Time 1 justice perceptions

Tables 1 and 2 contain the descriptive statistics and correlations among all variables included in the analysis, at time 1 and at time 2 respectively.

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Insert Table 1  
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Insert Table 2  
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I used multiple regression analysis. Overall fairness perceptions in immediate evaluation ( $Y_{\text{Time 1}}$ ), were the dependent variable. Distributive ( $X_{11}$ ), procedural ( $X_{12}$ ) and interactional justice perceptions ( $X_{13}$ ) at time 1 were key regressors or independent variables. I controlled for the effects of respondents' gender ( $C_1$ ), age ( $C_2$ ), work experience in months ( $C_3$ ), average grade ( $C_4$ ), nationality ( $C_5$ ) and religion ( $C_6$ ), because they could interfere with the results. Some of these control variables are dummy variables (gender, nationality and religion). Each one takes the value of zero, if the respondent is female, Portuguese or Catholic, respectively, or else takes the value of one, if the respondent is male, non-Portuguese and non-Catholic.

The regression equation for time 1 is:

$$Y_{\text{Time 1}} = \beta_0 + \beta_1 X_{11} + \beta_2 X_{12} + \beta_3 X_{13} + \beta_4 C_1 + \beta_5 C_2 + \beta_6 C_3 + \beta_7 C_4 + \beta_8 C_5 + \beta_9 C_6 + \varepsilon \quad (1)$$

I tested the fit of the model using  $R^2$  (0.62), the coefficient of determination. This statistic provides information about the goodness of fit of the model. In other words, it shows how well the model fits a set of observations or else how the regression line approximates the real data points. Ranging from 0 to 1, the better the regression fits the data, the closer the value of  $R^2$  is to one. It then represents the proportion of variability (62%) of overall justice that may be attributed to some linear combination of the regressors, as long as a constant is present in the equation in order for  $R^2$  to be meaningful.

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Insert Table 3  
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Table 3 contains the results for the regression analysis. At time 1, the coefficients for all facet- specific justice perceptions are positive, indicating that they influence positively overall fairness. However, only interactional justice perceptions ( $\beta_{x_3} = 1.02$ ; p-value  $x_3 = 0.00$ ) exert a statistically significant effect on overall justice perceptions.

In fact, I reject  $H_1$  and  $H_2$  while  $H_3$  is consistent with the results I obtained, i.e perceived fairness of work interactions relates positively to overall justice perceptions.

Another variable in the model with a significant p-value is gender, which means that gender influences overall fairness perceptions. In particular, men have more favorable fairness perceptions compared to women.

#### **4.2 Significance test of differences in Time 1 – Time 2 justice perceptions**

Across the analysis, all predictor variables were centered (standardized variables) and interaction terms were calculated using centered values, in order to maximize interpretability and to minimize problems of multicollinearity. Multicollinearity is a statistical phenomenon that happens when two or more explanatory variables in a multiple regression model are highly correlated. It does not reduce the reliability of the model as a whole, but it may affect calculations and consequently the model does not generate valid results about individual predictor variables. Fortunately, as showed on table 1 and 2, there are no high correlations among variables in the model.

Moreover, the effect of passage of time on overall justice was studied *ceteris paribus*, since I controlled again for the effects of respondents' gender, age, work experience in months, average grade, nationality and religion.

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Insert Table 4  
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In order to test  $H_4$ , I used multiple regression analysis with a different set of predictor variables. I joined data from time 1 and time 2 for this analysis. Different facets of

organization justice were included as key regressors (independent variables), in addition to the control variables, and three interaction terms between the different facets of organizational justice and a dummy variable indicating whether the perceptions were made immediately or at a delay. The significance of the coefficients corresponding to the interaction term allowed me to test how the passage of time affects the relationship between facet-specific justice perceptions and the overall justice judgment.<sup>2</sup> Overall justice judgment was the dependent variable.

Table 4 contains the results of the multiple regression analysis.

All facet-specific justice perceptions have positive impact on overall justice perceptions, at time 1. However, interactional justice is the only significant justice facet, with positive effects on overall justice ( $\beta_{X3} = 0.97$ ), since the p-values of distributive justice perceptions and procedural justice perceptions are too high to be considered significant. Now, to test statistical significance of the stability of the effects of facet-specific justice perceptions (explanatory variables) on overall justice over time, I defined a dummy variable indicating the time delay of the justice judgment, the delayed variable. Hypothesis 1, hypothesis 2 and hypothesis 3 focus on overall fairness being explained by the range of facet-specific justice perceptions. However, it may be different to think about these variables' contribution to overall justice at immediate time or their contribution at the delayed time, so that I will test the stability using the interaction terms that include the dummy for the delayed evaluation.

I propose to investigate the effects of distributive justice ( $X_1$ ), procedural justice ( $X_2$ ) and interactional justice ( $X_3$ ) on overall justice ( $Y$ ), interacted by delayed time ( $D$ ), and using several control variables: gender ( $C_1$ ), age ( $C_2$ ), work experience ( $C_3$ ), average grade ( $C_4$ ), nationality ( $C_5$ ), and religion ( $C_6$ ).

The regression equation for testing time 1 – time 2 differences is:

$$Y_3 = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4C_1 + \beta_5C_2 + \beta_6C_3 + \beta_7C_4 + \beta_8C_5 + \beta_9C_6 + \beta_{10}D + \beta_{11}DX_1 + \beta_{12}DX_2 + \beta_{13}DX_3 + \varepsilon \quad (2)$$

According to the results presented in Table 4, the impact on overall fairness of distributive justice is stronger in the delayed time, as we can see from the positive coefficient of the interaction between the dummy variable delayed and the distributive justice term ( $\beta_{X1D} = 0.67$ ;  $p\text{-value}_{X1D} = 0.01$ ). On the other hand, the impact of interactional justice is smaller in

<sup>2</sup> Regression Equation  $y' = b_1X' + b_2D + b_3X'D' + b_0 + \text{controls}$

$X'$  = Perceptions of fairness;  $D$  = Delayed dummy;  $Y'$  = Effects on overall fairness

For the interaction term, I first calculate standardized level of the justice facet and then I formed the cross product.

the delayed time, as shown by the negative coefficient of the interaction term delayed and interactional justice in the equation ( $\beta_{X3D} = - 1.25$ ;  $p\text{-value}_{X3D} = 0.00$ ).

At the delayed time, the positive coefficient associated to the dummy variable gender appears to be statistically significant, which means that the perceptions of overall fairness are subject to the gender of the respondent, and fairness perceptions are higher when the respondent is male. ( $\beta_{\text{Gender}}=0.60$ ,  $p\text{-value}_{\text{Gender}} = 0.00$ ).

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 Insert Figure 2  
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Figure 2 shows the effects on overall fairness of the passage of time by plotting the relationships between facet-specific perceptions and the overall fairness judgment. The graphs are constructed based on the results of the regression analysis (see Table 4). To draw the interaction plots (the interaction effects between time periods and facet-specific justice perceptions), I followed the following procedure.

To simplify calculations and results, I attributed values to the dummy variables: gender ( $C_1$ ) and religion ( $C_6$ ) equal to one, and nationality ( $C_5$ ) equal to zero, i.e. I considered that respondents are male, Portuguese and Catholics. The constant term (-1.54) was raised to 0.46 ( $= -1.54 + 2$ ) in order to be positive, and making the graphs clearer. The other variables were substituted by their mean.

Figure 2 depicts three different graphs based on the regression of overall fairness (Y) on immediate or delayed period (D) as a function of the predictors (X) for the data set. Substituting for concrete beta values, the variables' coefficients, the equation is:

$$\hat{Y} = -1.54 + 0.09 X_1 + 0.10X_2 + 0.97X_3 + 0.60C_1 - 0.01C_2 - 0.17C_3 + 0.05C_4 + 0.47C_5 - 0.06C_6 - 0.06D + 0.67DX_1 + 0.05DX_2 - 1.25DX_3 \quad (2.1)$$

In order to generate the regression lines, I rearranged the overall regression equation to show the regression of Y on  $X_1$ ,  $X_2$  and  $X_3$ , according to D.

$$\hat{Y} = (0.09X_1 + 0.10X_2 + 0.97X_3 + 0.60C_1 - 0.01C_2 - 0.17C_3 + 0.05C_4 + 0.47C_5 - 0.06C_6 - 1.54) + (0.67X_1 + 0.05X_2 - 1.25X_3 - 0.06)D \quad (2.2)$$

For **distributive justice** ( $X_1$ ),

To test the impact of distributive justice on overall fairness, the variables are substituted on equation 2.2 using their mean, except for the variable in study (distributive justice). The mean for standardized variables is zero.

Simple regression lines were then generated by substituting these values in turn into equation 2.2.

$$\hat{Y} = [0.09X_1 + 0.10(0) + 0.97(0) + 0.60(1) - 0.01(0) - 0.17(0) + 0.05(0) + 0.47(0) - 0.06(1) - 1.54] + [0.67X_1 + 0.05(0) - 1.25(0) - 0.06]D \quad (2.2.1)$$

At time 1, the dummy variable delayed is equal do zero ( $D = 0$ ):

$$Y_{\text{immediate}} = 0.09X_1 + 0.60 - 0.06 - 1.54 + 2 + (0.67X_1 - 0.06)D$$

$$Y_{\text{immediate}} = 0.09X_1 + 1.01$$

At time 2, the dummy variable delayed is equal do one ( $D = 1$ ):

$$Y_{\text{delayed}} = 0.09X_1 + 0.60 - 0.06 - 1.54 + 2 + (0.67X_1 - 0.06)D$$

$$Y_{\text{delayed}} = 0.76X_1 + 0.96$$

I am considering two points to draw each regression line, the value of overall fairness judgment when distributive justice perceptions are low (mean minus one standard deviation) and the value of overall fairness judgment when distributive justice perceptions are high (mean plus one standard deviation). Following Cohen and Cohen (1983), the values for low and high distributive justice were chosen to be one standard deviation below the mean (for low distributive justice) and one standard deviation above the mean (for high distributive justice).

For *time 1* ( $D = 0$ ),

The standard deviation ( $\delta = 0.84$ ) was added to the mean (high distributive justice).

$$Y_{\text{immediate/high}} = 0.09(0.84) + 1.01$$

$$Y_{\text{immediate/high}} = 1.08^3$$

The standard deviation ( $\delta = 0.84$ ) was subtracted to the mean (low distributive justice).

$$Y_{\text{immediate/low}} = 0.09 (- 0.84) + 1.01$$

$$Y_{\text{immediate/low}} = 0.94$$

For *time 2* ( $D = 1$ ),

The standard deviation ( $\delta = 0.84$ ) was added to the mean (high distributive justice).

$$Y_{\text{delayed/high}} = 0.76 (0.84) + 0.96$$

$$Y_{\text{delayed/high}} = 1.60$$

The standard deviation ( $\delta = 0.84$ ) was subtracted to the mean (low distributive justice).

$$Y_{\text{delayed/low}} = 0.76 (- 0.84) + 0.96$$

$$Y_{\text{delayed/low}} = 0.32$$

For **procedural justice** ( $X_2$ ),

To test the impact of procedural justice on overall fairness, the variables are substituted on equation 2.2 using their mean, except for the variable in study (procedural justice).

Simple regression lines were then generated by substituting these values in turn into equation 2.2.

$$\hat{Y} = [0.09(0) + 0.10X_2 + 0.97(0) + 0.60(1) - 0.01(0) - 0.17(0) + 0.05(0) + 0.47(0) - 0.06(1) - 1.54] + [0.67(0) + 0.05 X_2 - 1.25(0) - 0.06]D \quad (2.2.2)$$

At time 1, the dummy variable delayed is equal do zero ( $D = 0$ ):

$$Y_{\text{immediate}} = 0.10X_2 + 0.60 - 0.06 - 1.54 + 2 + (0.05X_2 - 0.06)D$$

$$Y_{\text{immediate}} = 0.10X_2 + 1.01$$

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<sup>3</sup> Calculations were done with all decimal numbers. The presented values are rounded.

At time 2, the dummy variable delayed is equal to one ( $D = 1$ ):

$$Y_{\text{delayed}} = 0.10X_2 + 0.60 - 0.06 - 1.54 + 2 + (0.05X_2 - 0.06)D$$

$$Y_{\text{delayed}} = 0.15X_2 + 0.96$$

As before, I am considering two points to draw each regression line, the value of overall fairness judgment when procedural justice perceptions are low and the value of overall fairness judgment when justice perceptions are high. The values for low and high procedural justice were chosen to be one standard deviation below the mean (for low procedural justice) and one standard deviation above the mean (for high procedural justice).

For *time 1* ( $D = 0$ ),

The standard deviation ( $\delta = 0.74$ ) was added to the mean (high procedural justice).

$$Y_{\text{immediate/high}} = 0.10 (0.74) + 1.01$$

$$Y_{\text{immediate/high}} = 1.09$$

The standard deviation ( $\delta = 0.74$ ) was subtracted to the mean (low procedural justice).

$$Y_{\text{immediate/low}} = 0.10 (- 0.74) + 1.01$$

$$Y_{\text{immediate/low}} = 0.94$$

For *time 2* ( $D = 1$ ),

The standard deviation ( $\delta = 0.74$ ) was added to the mean (high procedural justice).

$$Y_{\text{delayed/high}} = 0.15 (0.74) + 0.96$$

$$Y_{\text{delayed/high}} = 1.07$$

The standard deviation ( $\delta = 0.74$ ) was subtracted to the mean (low procedural justice).

$$Y_{\text{delayed/low}} = 0.15 (- 0.74) + 0.96$$

$$Y_{\text{delayed/low}} = 0.84$$

For **interactional justice** ( $X_3$ ),

To test the impact of interactional justice on overall fairness, the variables are substituted on equation 2.2 using their mean, except for the variable in study (interactional justice).

Simple regression lines were then generated by substituting these values in turn into equation 2.2.

$$\hat{Y} = [0.09(0) + 0.10(0) + 0.97X_3 + 0.60(1) - 0.01(0) - 0.17(0) + 0.05(0) + 0.47(0) - 0.06(1) - 1.54] + [0.67(0) + 0.05(0) - 1.25 X_3 - 0.06]D \quad (2.2.3)$$

At time 1, the dummy variable delayed is equal do zero ( $D = 0$ ):

$$Y_{\text{immediate}} = 0.97X_3 + 0.60 - 0.06 - 1.54 + 2 - (1.25X_3 + 0.06)D$$

$$Y_{\text{immediate}} = 0.97X_3 + 1.01$$

At time 2, the dummy variable delayed is equal do one ( $D = 1$ ):

$$Y_{\text{delayed}} = 0.97X_3 + 0.60 - 0.06 - 1.54 + 2 - (1.25X_3 + 0.06)D$$

$$Y_{\text{delayed}} = - 0.28X_3 + 0.96$$

Once more, I am considering two points to draw each regression line, the value of overall fairness judgment when justice perceptions are low and the value of overall fairness judgment when justice perceptions are high. The values for low and high interactional justice were chosen to be one standard deviation below the mean (for low interactional justice) and one standard deviation above the mean (for high interactional justice).

For *time 1* ( $D = 0$ ),

The standard deviation ( $\delta = 0.82$ ) was added to the mean (high interactional justice).

$$Y_{\text{immediate/high}} = 0.97 (0.82) + 1.01$$

$$Y_{\text{immediate/high}} = 1.80$$

The standard deviation ( $\delta = 0.82$ ) was subtracted to the mean (low interactional justice).

$$Y_{\text{immediate/low}} = 0.97 (- 0.82) + 1.01$$

$$Y_{\text{immediate/low}} = 0.22$$

For *time 2* ( $D = 1$ ),

The standard deviation ( $\delta = 0.82$ ) was added to the mean (high interactional justice).

$$Y_{\text{delayed/high}} = - 0.28 (0.82) + 0.96$$

$$Y_{\text{delayed/high}} = 0.73$$

The standard deviation ( $\delta = 0.82$ ) was subtracted to the mean (low interactional justice).

$$Y_{\text{delayed/low}} = - 0.28 (- 0.82) + 0.96$$

$$Y_{\text{delayed/low}} = 1.19$$

Once again graphs I built illustrate that overall fairness perceptions are positively correlated with the different facet-specific justice perceptions (when the relationship between the two is non-negligible), in both immediate and delayed time. However, in the delayed time, distributive justice has a greater impact on overall fairness than in the immediate time. In contrast, the impact of interactional justice on overall fairness decreases in delayed judgment.

## 5. Summary

According to the results described above, and considering the proposed hypotheses, perceived fairness of work outcomes, work procedures and work interactions relate positively to overall justice perceptions. However, in immediate period, just the coefficient for work interactions is statistically significant, which supports  $H_3$  but not  $H_1$  and  $H_2$  since the effect of distributive and procedural justice is not different from zero.

As for the last hypothesis, the model does not support it, given that the effects of distributive, procedural and interactional justice on overall justice change with the passage of time. Statistically, the interaction term is significant, and different from zero, for distributive and interactional justice. So, the impact of work outcomes and work interactions change over time and  $H_4$  is, therefore, rejected. There is no statistical significance for work procedures.

According to the result above, the effects of distributive and interactional justice perceptions on overall justice are not stable over time. They behave differently. In the delayed time, the work outcomes have a greater impact on overall fairness while work interactions have a smaller impact on overall fairness.

## **6. General Discussion**

Managers need to be sensitive and innovative to captivate people and to inspire employee's engagement and motivation at work. Many questions should be considered on managers' minds: How to motivate employees? How to increase organizational citizenship behaviors, job satisfaction and affective commitment? How to decrease absenteeism and withdrawal? How to create a perception of organizational fairness in the workforce?

Actually, organizational justice concerns must be their top priority, given that unfair treatment provokes powerful effects on employees' attitudes and behaviors. It is important for employers to completely understand the importance of the non-instrumental aspects of work motivation. At the same time, aspects such as distributive justice require special attention as well, not only because of the immediate evaluation of a fair/unfair event, but also because in a delayed evaluation employees are particularly likely to focus on the outcomes they had received in the past as they judge past fairness.

In this dissertation, it was examined the effects of memory over the construction of overall justice, considering the impact of organizational justice perceptions in the immediate time and one month after the event occur.

In fact, the results have shown that time does affect fairness judgments. In spite of being neglected by current organizational justice measures, the role of memory and the passage of time have been studied in a few papers, as I have discussed in Chapter 2. Some authors are already aware of the importance of this question to organizational justice research.

Cojuharenco, Patient, & Bashshur's (2011) studied how individual temporal perspective can affect the inputs to justice perceptions, concerning different time periods - past versus future (temporal orientation) and near versus distant (temporal distance) - and they found that distributive justice perceptions and interactional justice perceptions are not equally important when individuals think about different periods of time.

Construal Level Theory (Liberman, Sagristano, & Trope, 2002; Liberman & Trope, 1998; Trope & Liberman, 2000, 2003) is an important foundation for arguing that time affects fairness judgment since the mental representation of the object judged changes. Psychologically distant events (e.g. temporally distant) are judged based on high-level mental representations, and temporally proximate events are judged based on low-level representations. In several experiments, Cojuharenco, Patient, & Bashshur's (2011) showed that temporal distance (distant experiences) focused employee attention on the abstract features of the employment relationship, whereas otherwise employee attention is drawn to the "here and now" the details and specific aspects of how procedures and outcomes are implemented.

Thus, the importance of distributive justice rises over time, since these authors have shown that distributive justice events were more likely to be recalled at greater temporal distance than at a closer distance. On the other hand, the impact of interactional justice on justice concerns is greater when the time distance is short.

At a high level of construal, the employment relationship is conceptualized as the outcomes an employee is suppose to receive in exchange for his/her work effort (definitional aspects of work). Procedures and interactions related to the achievement of specific outcome allocations are conceived to be part of lower levels of mental representation (Cojuharenco, Patient, & Bashshur, 2011). So, when individuals think about work as distant in time, it will be construed more abstractly, and consequently, distributive justice matters more. The inverse process can be done for interactional justice. Hence, contrary to H<sub>4</sub> and consistent with the results of the analysis above, time does affect fairness judgments.

## **7. Conclusion and Limitations**

The contribution of this study rests in filling a gap in the existing theory: the passage of time can affect overall justice judgment. The understanding of the magnitude of time and memory's effect is essential, in order to understand why employees think and react to specific events and how do events influence fairness perceptions and employees' motivation.

Actually, little previous research about the impact of memory-based justice-related events versus immediate ones can be found. However, the role of memory is actually important to managerial decisions in ongoing employment relationships. In the work life,

managers should be aware that other aspects, together with immediate effects of unfair events, must be considered when evaluating the impact of injustice in the workplace, mainly because events are recalled and evaluated/re-evaluated.

Since distributive justice, procedural justice and interactional justice predict different outcomes, managers might feel tempted to pay attention to just those aspects that they believe to be of greater relevance. The main tangible goal for managers is that their organizations work effectively, in order to achieve conceptual goals, like satisfaction of consumer's needs and desires. Even if employers cannot do anything to eradicate distributive injustice, they may be able to reduce some causes by providing explanations, delicately and sensitively, as to why these unfortunate conditions are essential. Based on previous studies, if a particular type of fairness judgment is missing, employees will use other types of fairness to occupy the place, as fairness judgments are made (Lind, 2001).

It is critical to train managers on how to treat employees in a way that employees perceive to be fair. It is also important to call their attention for the passage of time – injustice matters here and now, but can also be recalled by employees in the future. Furthermore, managers should pay attention to all dimensions of organizational justice separately, since they are all important, even when some are shown not to matter at time 1, they matter more at time 2. My work shows that all facet-specific organizational justice perceptions are important.

There are some limitations in this study too. The majority of the students that had participated in this study have not a consistent work experience. According to Cojuharenco, Patient, & Bashshur (2011), and since work is time and spatial-distant for these students, greater temporal distance is more likely to trigger a focus on distributive justice (outcomes). However, this should not have affected the comparison of how individuals react to the same event immediately and after a delay. Moreover, to answer the questionnaires the students saw a movie, "The Office", which presumably transported them to a realistic situation.

In this study, almost all respondents were Portuguese. There are also studies that show similarities across cultures in the predictors of justice perceptions, but differences in the consequences of procedural and distributive justice judgments among cultures (Konovsky, 2000). Some further studies can test whether cultural difference affect the relationship between facet-specific and overall fairness perceptions over time.

To summarize, although I showed that perceived fairness of work interactions related positively to overall justice perceptions in immediate experience, the effects of distributive and interactional justice on overall justice changed over time. This conclusion puts all the organizational justice dimensions at the same level of importance. Some dimensions are

more significant today; others will be tomorrow, when the event is recalled. So that, managers should not overlook any of those dimensions.

## 8. Appendix

### 8.1 Appendix A Synopsis of “The Office” – pilot episode

Michael calls Jim into his office and goes over his quarterly progress. Jim is doing fine but has not closed one particular deal yet. Michael takes this opportunity to call the client and make the sale. Thus showing Jim "how it is done". However Michael mistakes the person he is talking to as a man when in fact he was talking to a woman.

Right away you notice that the show is actually be taped by a film crew. The documentarians want to show what life is like in the modern workplace.

Michael takes the crew around and shows us the layout of the office and introduces the staff.

The camera then pans over to Dwight. He is setting up for the day. He unlocks his desk, takes his phone receiver out of one of the drawers and plugs it into his phone base...while singing.

Jan comes in to speak to Michael about downsizing. Corporate must decide whether they are closing the Scranton branch (Michael's branch) or the Stanford Branch.

During the meeting with Jan, Todd Packer calls. Michael stupidly puts him on speaker phone. And Todd makes some pretty crude remarks about Jan. Michael hangs up on him.

No one in the office is to know about the downsizing, but immediately everyone does and the staff begins to update their resumes and plan for their futures.

Ryan, the temp, shows up for his first day on the job. Michael gets all excited and wants to show Ryan what a great boss he is. He does a Three Stooges impression into a pretty bad Hitler impersonation.

Jim is on the phone with a client when Dwight starts pushing all Jim;s papers back. Apparently, Jim's paper piles had crossed the desk line onto Dwight's. Dwight has one word for Jim...demarcation.

The very next picture shows Jim putting pencils in the cracks between the 2 desks as a fence (Eraser side down). He also has pencils (acting like spikes) attached to the phone and other office supplies facing outward toward Dwight. When Dwight comes back to his desk and see's Jim fortress, he lets Jim know he is in violation of saftey codes. Dwight could fall on one of his pencils and pierce an organ. Jim doesn't seem to care.

As Dwight is pushing out all of the pencils with his phone, Jim let's the downsizing rumor out of the bag. The news puts Dwight into a tailspin. He has been trying to get the office downsized for awhile.

Michael calls a meeting in the conference room to talk about the rumors of downsizing. Michael assures the group that their branch will not be dissolved.

Michael is introducing Ryan to Dwight. Dwight tells Ryan he bought a 1978 280Z for \$1,200. He's restored it and now it's worth \$3,000. He goes into his desk drawer to pull out picures to show Ryan when all of a sudden he starts freaking out and yelling Jim's name. Jim has encased Dwight's stapler in a jello-mold.

Dwight goes to get the stapler out of the mold and Michael tells him he has to eat it out.

Jim is talking to Pam about going out and having drinks...end of the quarter drinks...with everyone. He secretly just wants to see her outside of work. That's obvious from the beginning.

Pam agrees and the two are making plans just as Roy enters the office. Roy is Pam's fiancée and he works in the Dunder-Mifflin Warehouse downstairs. They've been engaged for 3 years. Pam asks Roy if he minds if she goes to have drinks with the gang. Roy says no they should just go home.

Pam leaves to do her faxes and Jim tries to convince Roy to come out and have drinks. Roy is not persuaded.

Michael tries to "punk" Pam by telling her she is fired for stealing post-it notes. Pam is stunned. Michael is pretty good actor in prank. He also tells her she will get no severance and to leave immediately. Pam starts to cry and Michael tells her she's been punk'd. Now Pam is pissed and tells Michael he is a jerk, storms out and slams the door.

Because Michael got such a kick out of Jim putting Dwight's stapler in jell-o, Jim put Michael's "World's Best Boss" mug in jell-o and leaves it on his desk for him to discover.

## 8.2 Appendix B

Table 1

*Descriptive statistics for all variables at time 1 (immediate)*

Variable	M	SD	1	2	3	4	5	6	7	8	9
1. Distributive Justice (N=67) a	2.34	.76	(.87) <sup>1</sup>								
2. Procedural Justice (N=67)	2.07	.71	.32*	(.76)							
3. Interactional Justice(N=67)	1.91	.73	.56**	.53**	(.85)						
4. Gender (1 = M, 0 = F)	.45	.50	.12	.11	.07	n.a					
5. Average Grade (N=57)	13.21	1.62	-.01	-.17	-.18	-.12	n.a				
6. Age (N=67)	19.94	1.17	-.03	.08	.04	-.01	-.07	n.a			
7. Catholic (N=58)	.79	.41	-.10	.22	.01	-.05	-.21	-.20	n.a		
8. Nationality (N=58)	.07	.26	.02	.01	-.06	.03	-.10	.23	-.03	n.a	
9. Work Experience (N=58)	2.07	6.40	-.16	-.01	.06	-.16	-.10	.58**	.05	.34*	n.a

*Note.* Coefficient alphas are indicated in parenthesis.

a N ranges from 57 to 67 due to missing data

\* p<.05

\*\*p<.001

- (1) Cronbach's alpha - It is commonly used as a measure of the internal consistency reliability of a psychometric instrument, and evaluates how well a set of variables or items explain/measure a single and one-dimensional construct.

Table 2

*Descriptive statistics for all variables at time 2 (delayed)*

Variable	M	SD	1	2	3	4	5	6	7	8	9
1. Distributive Justice (N=63) a	2.27	.92	(.93)								
2. Procedural Justice (N=63)	2.26	.77	.54**	(.76)							
3. Interactional Justice (N=63)	2.17	.89	.72**	.59**	(.91)						
4. Gender (1 = M, 0 = F)	.45	.50	.09	.14	.06	n.a					
5. Average Grade (N=57)	13.21	1.62	.00	-.09	-.01	-.12	n.a				
6. Age (N=67)	19.94	1.17	.02	-.14	-.01	-.01	-.07	n.a			
7. Catholic (N=58)	.79	.41	-.08	.08	.02	-.05	-.21	-.20	n.a		
8. Nationality (N=58)	.07	.26	.04	-.04	.10	.02	-.10	.23	-.03	n.a	
9. Work Experience (N=58)	2.07	6.40	.16	.15	.20	-.16	-.10	.58**	.05	.33*	n.a

*Note.* Coefficient alphas are indicated in parenthesis.

a N ranges from 57 to 67 due to missing data

\* p<.05

\*\*p<.001

Table 3

*Regression analysis of overall justice (standardized variables) - Time 1*

Independent Variables	Coefficient	P-value
Distributive Justice Perceptions	.05	.749
Procedural Justice Perceptions	.06	.681
Interactional Justice Perceptions	1.02	.000
Gender	.61	.002
Age	.07	.557
Work Experience	-.04	.077
Average Grade	.04	.500
Nationality	.82	.049
Catholic	.04	.876
Constant	-1.77	.000

*Note.*  $R^2=.62$ ,  $N=57$ .

Table 4

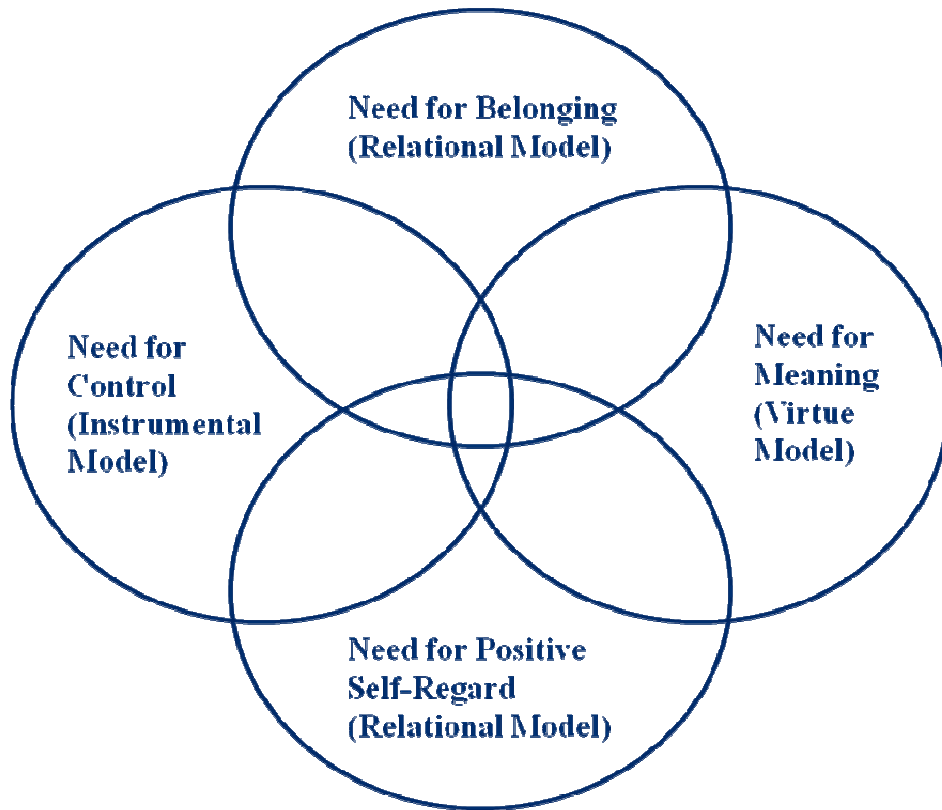
*Regression analysis of overall justice (standardized variables)*

Independent Variables	Coefficient	P-value
Distributive Justice Perceptions	.09	.633
Procedural Justice Perceptions	.10	.577
Interactional Justice Perceptions	.97	.000
Gender	.60	.000
Age	-.01	.941
Work Experience	-.02	.437
Average Grade	.05	.327
Nationality	.47	.195
Catholic	-.06	.791
Delayed	-.06	.734
Delayed*Distributive Justice	.67	.013
Delayed*Procedural Justice	.05	.842
Delayed*Interactional Justice	-1.25	.000
Constant	-1.54	.000

*Note.*  $R^2=.46$ ,  $N=114$ .

Figure 1

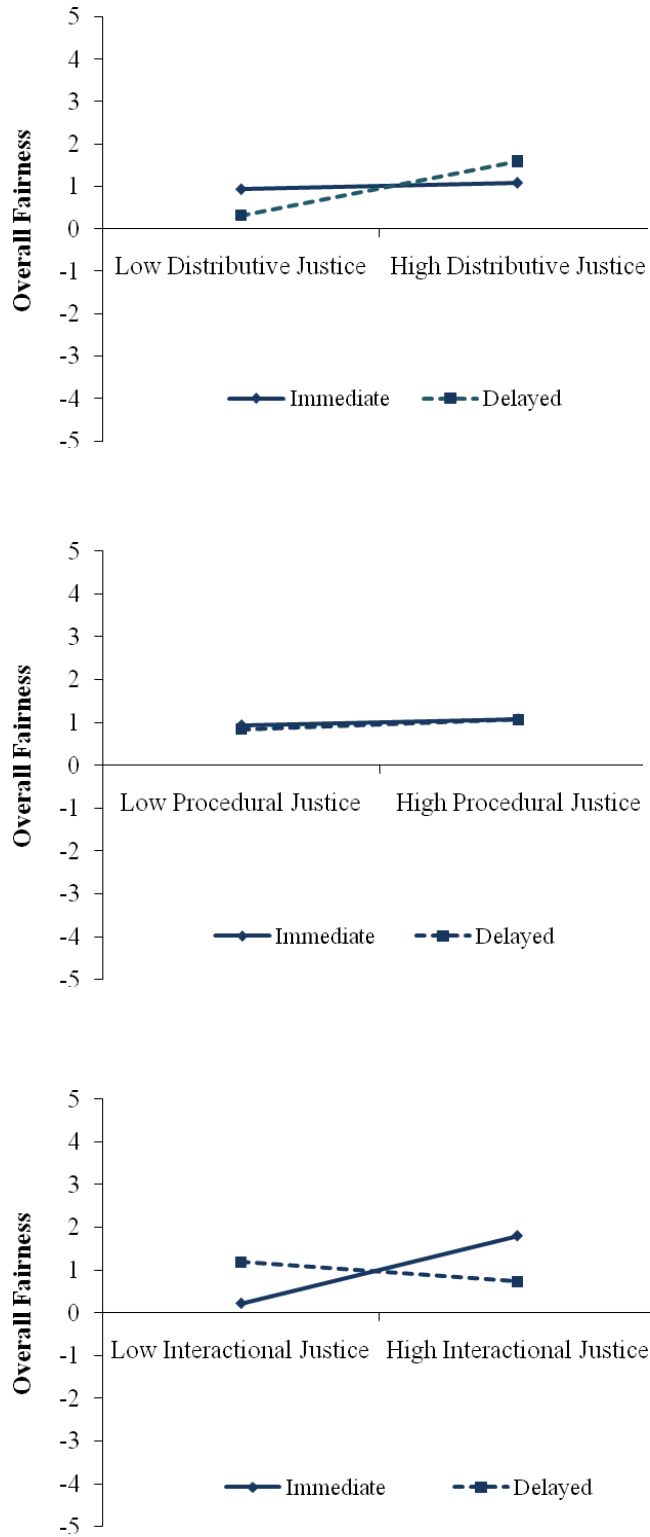
*The multiple needs model of organizational justice.*



*Source: Cropanzano, Byrne, Bobocel, & Rupp, (2001). Moral virtues, fairness heuristics, social entities, and other denizens of organizational justice. p.176.*

Figure 2

*Interaction effects between time periods and facet-specific justice perceptions.*



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