THE CONSTRUCT DEVELOPMENT AND MEASUREMENT OF CONTRIBUTIVE JUSTICE

By

William Campbell Scott

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

Psychology – Master of Arts

2022

ABSTRACT

Organizational justice has long since been considered multi-dimensional. However, the dimensionality of organizational justice has been stagnant in recent years, consisting primarily of distributive, procedural, interpersonal, and informational justice. When further examining the meaning of justice and fairness in organizations, it becomes apparent that these organizational justice dimensions are not capturing an important element of justice, that being the equality of opportunity. This is an important absence because the opportunity to contribute in organizations will likely affect both organizational outcomes and personal outcomes outside of work. Therefore, building upon previous work, the construct of contributive justice in organizations was introduced and defined as the fairness of opportunities to contribute to core work processes. Contributive justice consists of two dimensions, the equal opportunity to engage in complex labor, and the equal opportunity to participate in decision-making processes. A measure was constructed to capture these dimensions, along with specific subdimensions. In a sample of 534 full-time employees, the results suggested that the contributive justice measure was a reliable two-factor measure that was discriminable from the other organizational justice dimensions and was positively correlated with other variables such as meaningful work, instrumental voice, inclusion, empowerment, and self-esteem. Contributive justice was also found to have incremental validity over the other organizational justice dimensions. These results suggest the importance of contributive justice as an aspect of organizational fairness and employee well-being.

TABLE OF CONTENTS

Introduction

Organizational justice has been one of the most widely studied topics in organizational science fields since the concept was introduced by Greenberg (1987), who built upon the prior work of Homans (1961) and Adams (1965) regarding the fairness of outcomes in organizations. Greenberg (1990, p.400) went on to describe that organizational justice "attempts to describe and explain the role of fairness as a consideration in the workplace". Later researchers investigated the multi-dimensionality of organizational justice, culminating in the four dimensions suggested by Colquitt (2001), being distributive, procedural, interpersonal, and informational justice. Meta-analytic results have supported the notion that these organizational justice dimensions are related to many positive outcomes, such as job satisfaction, job performance, organizational commitment, organizational citizenship behaviors (OCBs), and organizational trust (Cohen-Charash, & Spector, 2001; Colquitt et al., 2001). These results clearly show the impact that organizational justice can have on one's attitudes and behaviors, which suggests that organizational justice can have a great degree of influence on an individual's overall well-being at work.

However, despite the extent of research conducted on organizational justice, there has been little to no advancement regarding the dimensions that constitute organizational justice, as the four dimensions by Colquitt (2001) have remained the dominant dimensions examined by researchers, in particular distributive and procedural justice. While these dimensions of organizational justice are important for capturing perceptions of fairness in the organization, there are still other elements of fairness in organizations that are not being captured by existing dimensions and these other elements are critical for further understanding and measuring justice.

To understand and identify these other elements and how these can potentially be captured, the meanings of "justice" and "fairness" must be evaluated further.

While the meaning of justice can vary to a great degree across cultures and nations, it is broadly considered that justice and fairness are equivalent terms (Daston, 2008). Therefore, when justice is discussed and evaluated, the fairness of a particular situation is also being discussed and evaluated and it is fairness that will determine the degree to which a situation is considered just. Justice has been described as having two key principles, (1) that each individual has equal rights to a system of equal basic liberties, and (2) social and economic inequalities must be arranged to be attached to conditions of fair equality of opportunity (Rawls, 1999). These principles were made broadly at a societal level, but they can also be applicable at an organizational level. When applying these principles of justice to work and organizations specifically, it is apparent that the current dimensions of organizational justice are not fully capturing this second principle. Since the equality of opportunity is lacking in current organizational justice dimensions, it is necessary to propose and create a new measure of a dimension of organizational justice to address the fairness regarding the equality of opportunity in one's work. This measure is based on the contributive justice construct, which will be further detailed below.

Contributive Justice

Contributive justice is a relatively new concept that was first described in Paul Gomberg's 2007 book: *How to make opportunity equal: Race and contributive justice.* Contributive justice was first defined as justice with regard to what people are expected and able to contribute in terms of work (Gomberg, 2007; Sayer, 2009). The basis of contributive justice was that the unequal distribution of social and economic goods is largely based on social group

membership and those in higher socioeconomic status groups receive the majority of these goods because they are able to contribute to society to a greater extent than those in lower socioeconomic status groups. Certain norms were argued to make up the core of contributive justice, namely the "duties and equal opportunity to contribute labor, and the duties and equal opportunity to participate in social decisions" (Gomberg, 2007, p.152). As Gomberg (2007) notes, contributing labor implies the related duties of the role and occupation an individual is in. These duties involve knowledge, skills, and abilities that individuals need to contribute, and therefore individuals have the responsibility to develop these duties so that they may be able to contribute adequately to the group. Participation in the group's decisions is also a part of one's duties that they should contribute as it shows that they are invested in decisions being made that affect them and their social group.

It is important to note that Gomberg's (2007) conception of contributive justice is done so at a societal level, mainly in response to the social inequalities faced by many individuals, such as racial or ethnic minorities. Therefore, it is necessary to evaluate whether the norms of contributive justice introduced by Gomberg (2007) would also be relevant at the organizational level, as is the focus of this thesis. The duties to contribute labor and participate in decisions, while still important, are more relevant at the societal or individual level, rather than the organizational level. This is mainly because it would be difficult for organizations to change an employee's perceptions regarding if that employee feels a duty to contribute their labor or participate in decisions. Perceptions of duty in these areas are better understood as being formed and influenced at either the societal level or individual level, rather than at the organizational level and therefore should not be included in the contributive justice construct.

Recent scholars have begun to explore contributive justice at the organizational level and how contributive justice can create a better working environment for individuals and make their work more meaningful (Sayer, 2009, 2011; Timmermann, 2018). Their work suggests that the Gomberg (2007) norms of the equal opportunity to contribute complex labor and the equal opportunity to participate in decisions are the norms of contributive justice that would be relevant at the organizational level. Roberson and Scott (2022) later redefine contributive justice as "the fairness of opportunities to contribute to core work processes in workgroups and organizations".

Not all individuals in an organization will have the equal opportunity to contribute their labor and participate in decisions to the same extent. In order for there to be contributive justice, there must be equal opportunities for individuals to contribute their labor and participate in decisions, regardless of their role or position in the organization. Contributive justice is therefore recognizing that there currently is an emphasis placed on what people *do* contribute with not as much discussion regarding what people are *able* to contribute, and how inequalities in what people are able to contribute represent a form of injustice that is not often discussed (Roberson & Scott, 2022). The injustice stemming from inequalities in what people are able to contribute relates to the fact that the contribution of one's labor and participation in decisions are two of the primary processes that determine the degree to which one is able to contribute to the organization, which impacts organizational outcomes such as compensation/benefits, inclusion, and empowerment.

If one is not provided with these opportunities, then they will not be able to contribute to the same degree as another who is provided with these opportunities, and therefore will receive fewer organizational outcomes as a result. In the existing organizational justice framework, this

distribution of outcomes would still be considered fair because the outcomes were based on what each individual contributed, and if one individual contributed more, then it is fair that they received greater outcomes. The contributive justice framework, in contrast, would not consider this distribution of outcomes fair because the individuals did not have the same opportunity to contribute their labor and participate in decision-making processes, thus limiting the degree to which they were able to contribute. In the following sections, to clarify and explain the contributive justice construct, I will elaborate on these two dimensions (the equal opportunity to contribute labor and the equal opportunity to participate in decision-making processes).

Contributing Labor: Complex vs. Routine Labor

While most individuals do have the opportunity to contribute their labor in some form, the type of labor they contribute will differ greatly across individuals and groups. Not all types of labor will result in an individual making the same level of contributions, as this is dependent on the complexity of the labor, with greater complexity of labor most often leading to greater contributions (Sayer, 2009). To help better understand what constitutes complex labor, Sayer (2009) notes that a complex job would be interesting and demands the use of skilled, practical judgment that enhances the capacities, recognition, and satisfaction of the worker. Routine labor on the other hand can be characterized as labor that is menial, mundane, repetitive, and low-skilled, and does not utilize the full capacities of workers (Gomberg 2007; Murphy, 1993).

Murphy (1993) states that the form of labor ultimately depends on the type of tasks the individual is engaged in, and whether those tasks allow the workers to use their knowledge, critical thinking skills, and abilities to a significant degree. Therefore, it is not sufficient for labor involving several different tasks within a given process to be considered complex labor. On the other end, it is possible for labor that involves only a limited and very small number of tasks to

be considered complex labor if the tasks themselves demand the use of practical judgment, knowledge, abilities, and various skills. The ideal scenario would be for there to be a degree of complexity in a multitude of tasks, allowing for full utilization of an individual's knowledge, skills, and abilities. However, it is unlikely that any job will have 100% complex tasks, meaning that there will always be some degree of routine and menial work that must be done. Murphy (1993) suggests that through various forms of rotation and sharing of complex and routine work, more workers will be able to avoid the dulling effects of routine and repetitive work and experience the benefits of complex and skillful work.

The importance of having the opportunity to engage in complex labor is further shown through "the Aristotelian principle", or that other things equal, human beings enjoy the exercise of their realized capacities (their innate or trained abilities), and that this enjoyment increases the more the capacity is realized, or the greater its complexity (Rawls, 1971, p. 414). This principle suggests that individuals naturally desire to develop and utilize their abilities at work in order to enjoy the rewards of self-development, self-esteem, recognition by others, and overall life satisfaction (Gomberg, 2007; Sayer, 2009, 2012; Timmermann, 2018). Similarly to the Aristotelian principle, contributive justice also has a theoretical foundation in the form of job enrichment, which argues that employees will be motivated and satisfied when their job tasks involve interesting and challenging tasks as well as when they have more responsibilities for making decisions (Hackman & Oldham, 1976; Parker, 1998).

Sayer (2012) argues that Aristotelian features involve an emphasis on what people are *able* to contribute and that this emphasis serves as a major determinant of their well-being or ill-being. Therefore, the lack of opportunities to contribute complex labor at work may result in increased ill-being due to greater limitations for one to develop and utilize their capacities.

Several drawbacks of individuals being limited only to routine labor as opposed to complex labor have been documented, as research found that over a ten-year period, the cognitive capacities of workers doing complex jobs developed while the cognitive capacities of workers doing simple and repetitive work deteriorated (Murphy, 1993). This is supported by the finding that a lack of intellectual stimulation at one's work may cause cognitive harm, leading to apathy and boredom (May et al., 2014). It is suggested that the practice of complex abilities in everyday labor directly affects other leisure activities and our general sense of well-being (Gomberg, 2007). There also appears to be a circle effect whereby individuals engaged in skilled and challenging work are most likely to express strong intrinsic job preferences and wish to continue learning and developing their skills to have more opportunities for promotion and reach higher positions within the organization (Gallie, Felstead, & Green, 2012). Individuals lacking the opportunity to engage in skilled and challenging work may not choose to learn and develop their skills, because they feel that may never be able to apply them at work. This, combined with the esteem effect mentioned earlier suggests that employees who have the opportunity to contribute complex labor are also more likely to achieve their career aspirations as well as personal growth.

Complex Labor and Meaningful Work

It would be impossible to discuss complex labor without also including a discussion about meaningful work, defined as "the degree to which the employee experiences the job as one which is generally meaningful, valuable, and worthwhile'' (Hackman & Oldham, 1976, p. 162). Meaningful work has already been shown to have numerous beneficial outcomes, including greater well-being (Arnold et al., 2007), greater job satisfaction (e.g., Kamdron, 2005), and greater organizational commitment, life satisfaction, and lower depression (Steger et al., 2012). Various scholars have posited a positive relationship between engaging in complex labor and

experiencing meaningful work. For example, Gomberg (2007) argues that if complex labor is concentrated into a subset of jobs, rather than shared out among all jobs, then many workers will be denied the chance to have meaningful work and the recognition that goes with it. This is why contributive justice states that there must be equal opportunity for individuals to contribute complex labor, as those who do not have this opportunity will not experience meaningful work to the same degree (Sayer, 2009). According to Timmermann (2018, p.87), "work that can be characterized as meaningful allows people to develop skills, receive recognition, and often enables them to be the critical citizens required by well-functioning democracies". Sayer (2009) argues that there can only be equality of opportunity in a meaningful sense if opportunities for complex and good-quality work are not scarce, and this can only be the case if complex labor opportunities are available for all workers.

One argument regarding the importance of meaningful work is if meaningful work is truly a necessity for justice/fairness if individuals receive adequate compensation. The first response to this argument is a study by Autin and Allan (2020), who found that workers across different social class backgrounds endorsed the desire for meaningful work equally, regardless of salary. The results of this study are in line with other researchers who propose that meaningful work is a basic human need (Stillman & Baumeister, 2009; Yeoman, 2014). This suggests that because meaningful work is a fundamental human need, depriving individuals of the opportunity to experience meaningful work is a great injustice. For example, it has been argued that the current market economy insufficiently stimulates many people at work, and that work must be stimulating so that workers feel sufficiently challenged and hence motivated to explore their potential (Lane, 1991). Many workers who only engage in routine work are much less likely to

find the work stimulating, and therefore are less likely to explore their potential or try to learn new skills.

Considering that work itself often consumes an overwhelming amount of energy and time, those who are limited to routine work only may be at a greater risk of losing the sense of purpose in their lives as they feel trapped in their work situation without room for growth or reaching their potential (Veltman, 2016). Meaningful work can allow individuals to promote the development of their capabilities and achieve recognition among peers and within their social circles (Timmermann & Felix, 2015; Schweiger, 2013). However, it becomes extremely difficult to flourish when continuously engaged in demeaning or menial labor while being denied the opportunity to experience meaningful work (Shiffrin, 2003; Veltman, 2016). Contributive justice recognizes that the opportunity to contribute complex labor and experience meaningful work is often very limited and only certain individuals are provided with this opportunity. Therefore, when individuals are denied meaningful work by not having the opportunity to contribute complex labor, this leads to a lack of fairness and injustice in the workplace. Addressing the fairness regarding what form of labor individuals are able to contribute can help to solve this injustice in experiencing meaningful work.

How the Equal Opportunity to Contribute Complex Labor Should Be Measured

The equal opportunity to contribute complex labor at work was established as a norm in Gomberg's (2007) description of contributive justice. However, in reviewing the literature related to contributive justice and other organizational justice dimensions, it is necessary for contributive justice to also capture other aspects that facilitate complex labor opportunities. Complex labor as discussed earlier can be described as labor that is interesting/intellectually stimulating and demands the use of certain skills/abilities, practical judgement, and problem-

solving that enhances the capacities, recognition, and satisfaction of the worker (Sayer, 2009). It is important to note that complex labor is a subjective assessment, as two individuals may have different perceptions as to what they would consider complex labor to be. Complex labor opportunities are strictly referring to the type of labor (i.e., the job tasks) that is occurring in the workplace and is not discussing outcomes of work. For example, the opportunities individuals have to use their skills and abilities at work would be considered complex labor, but outcomes or individual differences such as job performance (how well one performs the labor) or general mental ability (the degree to which one has complex skills/abilities) would not be considered complex labor. Therefore, contributive justice is assessing the degree to which individuals perceive that they have the *equal opportunity* to contribute complex labor in their work tasks compared to others in a similar job position.

To better define what is meant by "opportunity" previous work examining opportunities in organizations can be investigated. Ford et al. (1992) stated that the opportunity to perform tasks can be considered multidimensional, consisting of breadth, activity level, and the type of tasks performed. Breadth can be considered the number of different tasks performed on the job, activity level (or depth) can be considered the number of times a specific task is performed on the job, and the type of tasks performed involves the complexity or difficulty of the tasks being performed on the job (Ford et al., 1992). When contributive justice refers to equal opportunities to contribute complex labor, the opportunities should encompass these dimensions.

First, organizations should ensure that an employee is provided with the chance to engage in a variety of work tasks that utilize complex skills and abilities, thus satisfying the breadth dimension of opportunity. Next, organizations should ensure that an employee is provided with the chance to engage frequently in work tasks that utilize complex skills and abilities, thus

satisfying the depth dimension of opportunity. Lastly, organizations should ensure that an employee is provided with the chance to engage in work tasks that have at least a certain degree of complexity and difficulty, so as to make use of the complex skills and abilities that the employee currently possesses. It is also relevant to mention that it is not necessary for employees to engage in the exact same variety of work tasks, frequency of work tasks, or difficulty of work tasks as each other for there to be contributive justice. In fact, it is more likely that certain employees will want to focus on having a variety of work tasks, while other employees want to focus on a smaller number of work tasks but engage in them more frequently. However, regardless of these factors, contributive justice argues that each employee should be given the same opportunity as others in similar job positions to engage in a variety of complex tasks and frequently engage in complex tasks.

While the equal opportunity to contribute complex labor at work is a crucial component of contributive justice, there are prerequisites in place that dictate whether one has the capability to contribute complex labor. These prerequisites come in the form of possessing complex skills and abilities. Therefore, it is necessary for all individuals to have equal access to sufficient training/development opportunities that allow them to learn complex skills/abilities. This is supported by Timmermann (2018), who argues that the key demands of contributive justice include the opportunities to develop skills and to learn how to be productive. Without these opportunities for training and development, some individuals will never have the opportunity to contribute complex labor because they are simply not capable of it due to a lack of complex skills and abilities. The opportunity to contribute complex labor is not sufficient and not equal without also providing development and training opportunities. It is also important that individuals who learn new skills and abilities have regular opportunities to make use of them

(Sayer, 2012). This suggests that the work tasks for individuals should be adjusted, when possible, as complex capabilities are developed.

Each employee should have access to programs that help train and develop a variety of complex skills and abilities that will be applicable to future work tasks. Many complex skills/abilities will most likely require repetition to be better developed and transferrable to work tasks. Therefore, it is necessary for training and development programs to be more than a one-off occurrence and rather have multiple occurrences or a regular schedule. In sum, this entails that contributive justice captures the equal opportunity for the training and development of complex skills and abilities. These opportunities come in the form of the breadth and depth of the training and development one receives. The literature on contributive justice mentions the necessity of training and skill/ability development as a requirement for contributive justice and how it can help to alleviate the unequal division of labor (Sayer, 2012; Mills et al., 2016; Timmermann, 2018).

Another element related to providing opportunities to engage in complex labor was the fact that routine labor is the other form of labor workers engage in and is a necessary component of most jobs. Gomberg (2007) argues that routine labor and complex labor should be shared to some degree among individuals in the organization, as it will provide all employees the opportunity to engage in complex labor and further develop their skills and abilities. Therefore, for there to be contributive justice, it is not necessary for employees to stop performing routine labor (which would be unfeasible), but instead that all employees should also have opportunities to engage in complex labor in addition to the routine labor already present in their job position. In particular, contributive justice is capturing the degree to which an individual has the opportunity to contribute complex labor in comparison to routine labor, as well as whether

routine labor is being shared among workers. If workers are being limited only to routine labor without the opportunity for complex labor, then there would be a lower degree of contributive justice. Previous literature mentions how the degree to which one engages in routine labor in comparison to complex labor is an important component of contributive justice, notably articles by Sayer (2009, 2012), who discusses how complex and routine labor is related to attaining meaningful work, and Timmermann (2018), who describes how a more even distribution of complex and routine labor is a key demand of contributive justice.

It is also important to consider that organizations are social entities and that the types of relationships one has with others in the organization can greatly influence the degree to which one desires to and feels safe engaging in complex labor, training and developing their skills and abilities, and taking advantage of opportunities that are presented to them. Therefore, individuals in the organization can help facilitate opportunities to contribute complex labor to others by providing encouragement, mentoring, support, and guidance. For example, a more experienced employee can help a less experienced employee with a work task that requires complex skills/abilities by providing encouragement and guidance to that employee. For the majority of workers who are limited to only routine labor, engaging in tasks that require complex skills and abilities (or training these skills/abilities) may appear daunting and unfeasible, as many of these workers may underestimate their own capabilities.

Therefore, support from others in the organization can greatly assist individuals in making use of and getting the most out of the opportunities provided to them. In fact, previous research has suggested that workgroup support is important for the successful transfer of training to the performance of work tasks (Huczynski & Lewis, 1980; Marx, 1982). Additionally, Ford et al. (1992) found that workgroup support is particularly important when the difficulty of the

training is higher and suggested that a lack of support may lead to employees avoiding more complex tasks and only performing easier tasks following training. These results show the importance and relevance of receiving support from others in the organization during training and development. However, this support should go beyond the training/development phase and be a continuous aspect of the work environment to help facilitate the effectiveness of employees engaging in complex tasks.

Based upon these areas related to complex labor, it can be inferred that contributive justice is not only capturing the opportunity to contribute complex labor. There are other elements related to complex labor that can dictate the fairness of what people are *able* to contribute. For example, individuals who are not provided with the opportunity to develop and train their skills/abilities would not be able to contribute complex labor to the same degree as someone who received this development and training. Similarly, the extent to which an individual is actually *able* to contribute depends on the degree to which they engage in routine labor compared to complex labor, as the sharing of routine labor can allow an individual to have greater opportunities to contribute complex labor. Lastly, support from others in the organization regarding employees contributing complex labor is important because this support (encouragement, awareness, guidance, etc.) will affect whether or not one is able to contribute to the same degree. Clearly, the equal opportunity to contribute complex labor is an important aspect of contributive justice, but contributive justice goes beyond this and captures other expectations that promote the fairness of what individuals are able to contribute in their organization. These expectations are illustrated in Table 1. Therefore, I propose the following hypothesis:

Hypothesis 1: The equal opportunity to contribute complex labor will be a dimension of contributive justice.

Participation in Decision-Making Processes

Following the discussion regarding the first dimension of contributive justice, the equal opportunity to contribute complex labor, the second dimension of contributive justice can be discussed, which is the equal opportunity to participate in decision-making processes. Participation in decision-making processes is an important aspect of the workplace, as those who participate in decision-making processes are likely to be perceived as contributing more to the organization and will receive greater organizational outcomes as a result. When individuals have the opportunity to participate in decision-making processes, they are likely to have increased social and self-esteem and feel a sense of belonging and closeness with the group (Gomberg, 2007). Moreover, when provided with the opportunity to participate, individuals are able to have a voice in the decisions that affect them and their work directly. Therefore, individuals are likely to feel as though they were able to contribute their thoughts and input to the group when having the opportunity to participate. There are many benefits associated with participating in decision-making processes (and engaging in employee voice), including increased feelings of autonomy and task identity, performance effectiveness, organizational commitment, and job satisfaction, to name a few (Han, Chiang, & Chang, 2014; Ng & Feldman, 2012; Scott-Ladd & Marshall, 2004). This leads to discussing the relationship between voice behaviors and participation in decision-making.

Employee voice is considered to be an act of verbal expression that is discretionary, such that individuals choose whether or not to engage in this behavior at any particular moment in time (Van Dyne & LePine, 1998). Employee voice is going beyond merely criticizing aspects of

the workplace, as it is more focused on making suggestions for change or discussing ideas for continuous improvement. It is also important to distinguish that there are formal and informal voice mechanisms in organizations. Examples of formal voice mechanisms include staff/team meetings, quality circles, work councils, problem-solving and improvement teams, and suggestion schemes while informal voice mechanisms include informal discussions, open-door policies, emails, and word-of-mouth discussions (Mowbray, Wilkinson, & Tse, 2015). Research has suggested that formal voice mechanisms are the more impactful of the two, as it is theorized that employee silence (refraining from voice behaviors) could be attributable to a lack of formal voice mechanisms (Morrison & Milliken, 2000).

When individuals are provided with opportunities to participate in decision-making processes, it also allows them to engage in employee voice, and these opportunities can be viewed as formal voice mechanisms. This is because individuals can provide their input for various aspects of the decision when participating, as well as discuss improvements and share information with one another. The act of providing input to the group is voluntary, in that not all employees will necessarily want to participate, but research has suggested that employees are motivated to provide their input when given the opportunity to do so (Van Dyne, Ang, & Botero, 2003). Taken together, providing the opportunity to participate in decision-making processes can allow individuals to experience employee voice.

Measurement of the Equal Opportunity to Participate in Decision-Making Processes

The contributive justice framework asserts that employees should receive the equal opportunity to participate in decision-making processes. Much like with the equal opportunity to contribute complex labor, it is helpful to define what is meant by opportunity in the context of participation in decisions. We can use the breadth and depth dimensions of opportunity from

Ford et al. (1992) to help define the opportunity for participation in decision-making processes. First, since participating in decision-making processes requires discussion, opportunities for participating should allow an individual to discuss a variety of topics related to that decision instead of only being restricted to a specific detail/element of the decision without the chance to provide input on other elements. These topics could include opportunities to discuss the pros and cons of decisions, offer alternative options, and discuss how decisions would affect them and their coworkers. This would satisfy the breadth dimension of opportunity. Second, opportunities for participating should also allow an individual to discuss a decision (or elements of that decision) in depth, rather than being restricted to only talking at a surface level. This can also be thought of as the length of discussion an individual is allotted when providing their input. Both breadth and depth are important to consider when defining the opportunity to participate in decision-making processes.

Simply providing the opportunity to participate in decision-making processes is not adequate alone for there to be contributive justice. This is because there are other aspects related to participation that will affect the degree and quality to which one is able to participate in decisions at work, ultimately affecting the level of contributions one is able to make while participating. The first aspect is employees being provided with access to the relevant information regarding the decision that needs to be made as well as existing solutions that have been proposed. If an employee does not have this information, it will make it much less likely that they will be able or willing to participate in decision-making processes to the same degree as someone with this information. An employee may not be able to provide their input because of their lack of information regarding the decision, thus limiting the degree to which they can contribute. In addition, an employee may not be willing to participate in decision-making

processes because they may fear coming across as incompetent or unknowledgeable if they try to provide input when they are not familiar with pertinent information regarding the decision.

The quality of the participation opportunity is also an important aspect of contributive justice. This can be considered the extent to which other members of the group (and especially the leaders) are listening to, considering, and providing feedback on the input provided by an employee. To illustrate this, one could consider a scenario in which there are two employees participating in a group meeting regarding a decision that needs to be made. Both employees have been given access to the pertinent information regarding the decision and are given the time and the platform to discuss their opinions and suggestions to the group. However, one of the two employees provides their input to the group, but the conversation quickly moves to a different member of the group without any further discussion. When the other employee provides their input to the group, the group is quick to respond to and engage in further conversation with that employee, as they are strongly considering what was said by them.

In this scenario, the first employee would most likely feel ignored and that their input was not seriously considered by the group, making it much less likely that they would perceive that they fully participated in and had influence over the discussion. The second employee, on the other hand, would most likely perceive that they were able to participate in the discussion to a substantial degree because of their interactions with others in the group. The other individuals in the group would also likely perceive that the second employee contributed more to the discussion than the first employee, despite not giving both employees the same consideration for their input. This scenario details how providing only the opportunity to participate in a decision can lead to employees receiving different outcomes and perceived levels of contributions.

This element of participation is also discussed by Timmermann (2018), who argues that the fair evaluation of input is a key demand of contributive justice. Further support comes from recent findings regarding voice recognition and how certain employees may not have their input evaluated in the same manner as other employees. Indeed, Howell et al. (2015) found that lower-status employees did not have their voice recognized as frequently as higher-status employees and that even when lower-status employees increased their amount of input, they still were recognized less than their higher-status counterparts. Based on these findings, it is evident that even though an employee may be given the opportunity to participate and express their input, they ultimately may not be treated in the same way as other employees, and they may have their input discounted or not be given credit for their input entirely. Therefore, in order for all employees to truly have the equal opportunity to participate in decision-making processes and make contributions, it is imperative for the employee to perceive that their input was fairly considered, discussed, and recognized by others in the decision-making process.

Participation in decision-making will also be affected by the degree to which others in the organization provide support (encouragement and guidance) to individuals who participate in decisions. Certain groups may never have had experience participating in decisions and may feel intimated and refrain from participating even when given the opportunity. Therefore, it is necessary for individuals in the organization to help create a positive environment for employees to participate in, and this can be accomplished through older/experienced employees supporting and providing guidance to less experienced employees. Without this support, individuals will not be able to participate to the same degree as others because there would be a lack of support and guidance for less experienced employees, which then stunts their ability to participate even when given the opportunity to do so. Research has found that psychological safety and organizational

support (both influenced by support from individuals in the organization) are positively related to employee voice behaviors (Kim et al., 2013; Walumbwa & Schaubroeck, 2009) and therefore it is likely that support from others is positively related to the quality of participation and the likelihood that one would continue to participate in decision-making processes when given the opportunity.

Taken together, contributive justice not only involves the equal opportunity to participate in decision-making processes, but also whether employees received information regarding the decision, employee perceptions of others listening to and considering their input while participating, and the support/encouragement from others in the organization when one participates. These elements are illustrated in Table 2. Therefore, I propose the following hypothesis:

Hypothesis 2: The equal opportunity to participate in decision-making processes will be a dimension of contributive justice.

The Necessity of Contributive Justice

Now that the construct of contributive justice has been introduced, it is important to further explain why contributive justice is necessary in the workplace, and how inequalities in contributive justice create a lack of justice and fairness in organizations. The primary cause of contributive injustice has to do with the unequal social division of labor that is present in almost all organizations today (Sayer, 2009, 2011, 2012). This unequal division of labor involves the fact that organizations segregate interesting (complex) and uninteresting (routine) tasks into different occupations and roles and that this segregation is institutionalized and normalized in society (Sayer, 2009). The unequal division of labor stems from the fact that jobs that involve

complex tasks typically require specialized knowledge, skills, and abilities, meaning only a small number of individuals will be qualified for those jobs.

These individuals are those who can afford and have access to resources such as higher education, training, and internships, meaning these jobs are likely to be filled by those with higher socioeconomic standings (Morrison, 2019). Those who could not afford or did not have access to these resources will most likely have to settle for occupations or roles that have little to no opportunity to contribute complex tasks in the workplace. Unfortunately, many in society may consider the unequal division of labor to be reflective of an individual's abilities and efforts and that it is just in the sense of meritocracy (Sayer, 2009). However, this perspective fails to include the fact that not every individual has equal access to resources that allow them to develop their knowledge and abilities to perform jobs that require them. Sayer (2012) argues instead that the inequalities in the opportunity to contribute complex labor are structural, being products of the unequal division of labor rather than merely of unequal individual ability or skill, or products of prejudice.

Despite the negative effects of these inequalities, there are multiple justifications as to why there continues to be an unequal division of labor in most organizations today. The first being that the division merely reflects differences in individual abilities (Sayer, 2012). This justification actually has quite a long history of being challenged, as paraphrasing what Adam Smith wrote in *The Wealth of Nations* (Smith, 1776/1976, Bk I, ch. ii, pp. 19 –20):

"The difference of natural talent and abilities in different individuals is, in reality, much lower than we perceive them to be and that these differences which appear to distinguish individuals of different professions, is not the cause but rather the effect of the division of labor. These

differences between the most dissimilar occupations (low-skill vs high-skill) for example, seems to arise not so much from natural abilities, but instead from habit, custom, and education".

In essence, Smith is arguing that the unequal division of labor is not based on the differences of individual abilities, but rather is based on the differences in access to financial, educational, and social resources. These differences are already reflected at birth, as a child born into a higher socioeconomic status family is more likely to have many of these resources (and thus develop their abilities better) compared to a child born into a lower socioeconomic status. Research has provided evidence for this claim, as children's cognitive capacities develop more slowly in low social class children compared to high social class children so that the most intelligent of the low social class children are overtaken by the weakest of the high social class children at only the age of 10 (Feinstein, 2003). Moreover, low social class children also have fewer opportunities to develop their abilities outside of school, as these children's parents are also a part of the low social class and thus are often subject to long working hours, including weekends. This entails that low social class children are going to have fewer opportunities to interact with their parents as well as other adults/children outside of school in a daycare setting (Sayer, 2012). This is in contrast to children in middle- and upper-class families, as there will be greater emphasis on children's reasoning, education, self-development, and on talking to adults (Evans, 2006; Lareau, 2003; Walkerdine & Lucey, 1989).

Since it is impossible to make all individuals have equal social standings at birth, a solution to help mitigate this inequality in labor is for there to be more contributive justice in organizations. As mentioned earlier, contributive justice is not suggesting that individuals without the required competencies should be performing the same tasks as those with these competencies, but rather that each individual should have the opportunity to contribute complex

labor in some form, which involves in part providing resources and training to individuals so that they can slowly develop complex labor competencies. As noted by Gomberg (2007) in his conceptualization, individuals seeking to engage in complex labor must put time and effort into developing their complex competencies. Therefore, contributive justice is firmly against providing equal opportunities to individuals who are "freeloaders", or individuals who refuse to put in time/effort into developing complex competencies when they are given the resources to do so (Gomberg, 2007). These individuals not only would take away the opportunities from others who are working hard to develop their complex competencies but also would serve as an overall decrement to the group since they are not contributing their labor to a high degree. However, for other individuals who are not "freeloaders", contributive justice would involve the organization providing employees with opportunities to contribute complex labor commensurate with the level of one's capabilities, and these opportunities would increase over time as individuals develop more complex abilities.

It is also important to mention that it is entirely possible for an individual to be active and involved in training/development programs, but they still may not be able to develop certain complex skills and abilities. Due to the efforts and commitment of these individuals, contributive justice would advocate for them to still have opportunities to contribute complex labor and participate in decision-making processes, to the extent to which they are capable. It is unlikely that an individual will not develop *any* complex skills/abilities through training, and therefore opportunities to contribute complex labor should still be provided. In cases where there are not many complex labor opportunities due to limited individual capabilities even after training, then the opportunity to participate in decision-making processes should increase. Although high-quality participation in decision-making processes is still somewhat reliant on complex

skills/abilities, it would still be less reliant on complex skills/abilities compared to engaging in complex labor and may be more attainable for these individuals.

Contributive justice, in trying to combat the injustices caused by the unequal division of labor, will also help address organizational injustices. Contributive justice, through providing individuals equal opportunities to make contributions in the workplace, will also help individuals receive fair outcomes based on these contributions. Instead of simply rewarding individuals who contribute more, as is done in the current organizational justice framework, contributive justice seeks to even the playing field in terms of what individuals are able to contribute to the organization. As discussed previously, individuals from lower-status backgrounds are less likely to engage in complex labor and participate in decision-making processes, both of which are key determinants of how much one can contribute (Gomberg, 2007; Timmermann, 2018). Contributive justice can provide these individuals with these opportunities, therefore increasing the contributions individuals can make, thus leading to greater organizational outcomes in addition to meaningful work and self-esteem.

Contributive Justice Relationships

While the dimensions of contributive justice and the necessity of contributive justice have been discussed, in order for proper measurement, it must also be demonstrated that contributive justice as a construct is conceptually distinct from other related constructs such as the other organizational justice dimensions, meaningful work, and employee voice. In doing so, this demonstrates the discriminant validity (Campbell & Fiske, 1959) of contributive justice and also demonstrates that other measures are not already capturing the contributive justice construct. This strengthens the argument that the contributive justice measure is needed and is not currently

represented by any existing measure. In the section below, the hypothesized relationships between contributive justice and other related constructs will be presented.

Discriminant Validity Hypotheses

First, the relationship between contributive justice and the established organizational justice dimensions will be examined. Distributive justice focuses on the fairness associated with the outcomes one receives based on their contributions (i.e., if one contributes more, one should receive more outcomes). Contributive justice instead focuses on the *equality* of the opportunity to contribute. Contributive justice recognizes that social structures and demographic groups can influence one's opportunities to contribute to core work processes. Distributive justice does not consider the factors that influence one's opportunities to contribute, and only considers what individuals do contribute (the employee's output). Contributive justice serves as the principle to justify the allocation of resources such as complex labor and participation opportunities to be more equal in the organization and to address inequalities due to social group and status hierarchies (Timmermann, 2018). Contributive justice, therefore, rejects a pure equity basis of fairness that is present in distributive justice and instead contends that because opportunities dictate the level of contributions one can make, these opportunities should be equally provided amongst employees in similar job positions with similar competencies. Therefore, contributive justice can be differentiated from distributive justice.

The next organizational justice dimension to discuss is procedural justice, which is concerned with processes that are used to make decisions regarding the allocation of one's outcomes and whether employees perceive these processes to be fair (Konovsky, 2000; Naumann & Bennett, 2000). Contributive justice can be differentiated from procedural justice in that contributive justice is concerned with providing employees equal opportunities in multiple

work processes and contexts (complex work tasks, training, participation in decisions, social support). Contributive justice is also concerned with making the quality of these opportunities equal so that individuals can experience meaningful work and instrumental voice. Procedural justice instead has a narrower focus on employees having the ability to influence decisions regarding outcome allocation processes (Shapiro, 1993; Thibaut & Walker, 1975). Fair process criteria in procedural justice (ex. power-sharing) are typically only related to the allocative process itself, rather than to one's overall work experience. For example, the Bauer et al. (2001) procedural justice in employee selection measure has an opportunity to perform component, but it is specifically only considering the opportunity to perform during the selection process and not other work processes. An individual may have equal opportunities in some processes (ex. selection) but not others (ex. complex labor and participating in decisions), suggesting that procedural justice alone is inadequate to fully capture the equality of opportunities to contribute in core work processes. Contributive justice goes beyond focusing only on outcome allocation processes and is instead concerned with the equal opportunities and equal quality of opportunities to contribute to core work processes.

Interactional justice (interpersonal and informational justice) represents the degree to which individuals are treated with respect and provided with adequate information regarding the outcome allocation procedures (Colquitt, 2001). Interactional justice can also be differentiated from contributive justice as it is not focused on the equal opportunities to engage in complex labor or participate in decision-making processes as contributive justice is. Rather, it is more reflective of supervisor-subordinate relationship quality (Masterson et al., 2000). While it the supervisor relationship quality reflected in interactional justice is important for helping to enact and provide support to employees regarding complex labor and participation opportunities, it is

clearly a distinct construct from contributive justice and has a much narrower scope on supervisor respect and information distribution. Taken together, contributive justice is distinct from all of the existing organizational justice dimensions, none of which focus on the equal opportunities to contribute to core work processes.

Hypothesis 3: Contributive Justice will be discriminable from (a) Distributive, (b) Procedural, (c) Interpersonal, and (d) Informational Justice.

Next, in evaluating the relationship between contributive justice and meaningful work, the previous discussion involved how engaging in complex labor may help to increase the chances that employees perceive meaningful work, and that complex labor may even be a requirement for this perception. However, this does not mean that meaningful work and contributive justice are the same construct, despite the expectation that they will be positively correlated with one another. More recent conceptualizations of meaningful work have divided meaningful work into three areas, (1) psychological meaningfulness in work (the subjective perception of meaningfulness at work), (2) making meaning through work (life benefits such as personal growth), and (3) greater good motivations (impacting society/community positively through work) (Steger, Dik, & Duffy, 2012). Compared to the definition of contributive justice presented in this thesis, it can be observed that meaningful work does not touch on the content of one's work, but more so the outcomes of one's work. Therefore, contributive justice is specifically measuring <u>what</u> is occurring in the job (the type of tasks that are being engaged in, if complex skills/abilities are being used, if there are sufficient training opportunities, if there are opportunities to participate in decision-making, etc.) while meaningful work is measuring the <u>results</u> of the job, as seen in Steger, Dik, & Duffy (2012). Therefore, it is expected that contributive justice is measuring a separate construct from meaningful work.

Hypothesis 4: Contributive Justice will be discriminable from Meaningful Work.

Employee voice is also distinct from contributive justice. First, contributive justice is concerned with whether or not employees were *given the equal opportunity* to participate and voice their input in decision-making processes in addition to whether employees were given the opportunity to contribute complex labor. Voice, on the other hand, is only measuring whether an employee *actually engaged* in discretionary acts of verbal expression, both inside and outside of decision-making processes, and does not concern itself with complex labor to any degree. Voice as a construct does not take into account the differences between groups and inequalities that exist in organizations due to the division of labor. Contributive justice in contrast recognizes these differences and inequalities and is focused on measuring not only the equal opportunity to participate but also the equal quality of participation in the form of fair consideration of inputs. Taken together, it can be argued that employee voice and contributive justice are distinct constructs.

Hypothesis 5: Contributive Justice will be discriminable from Employee Voice.

It is also important to note that some voice behaviors are likely to be more related to contributive justice than others. Voice behaviors can be differentiated into instrumental voice and non-instrumental voice. According to Korsgaard & Roberson (1995), instrumental voice involves the potential to influence the conversation/decision by voicing one's opinion, while non-instrumental voice involves simply voicing one's opinion, regardless of the impact. While both forms of voice are expected to be related to contributive justice, I believe that instrumental voice will be more related to contributive justice than non-instrumental voice. This is mainly because instrumental voice will increase the degree to which one is able to participate in the decision compared to non-instrumental voice. If an employee perceives that they are able to

influence the conversation/decision by voicing their opinion (engaging in instrumental voice) then it is more likely that they will also perceive that others are listening to and considering their opinion, thus increasing participation quality. On the other hand, if an employee perceives that they are not impacting the conversation/decision despite providing their opinion (engaging in non-instrumental voice) then it is more likely that they will also perceive that others are not listening to and considering their opinion, thus lowering the degree to which they are able to participate in a quality manner.

Due to the broad range of possible voice behaviors and experiences, it may be beneficial to measure voice more specifically by using the instrumental and non-instrumental distinction when attempting to establish the relationship between voice and contributive justice. This will also be present in the previous hypothesis, as contributive justice will be compared to instrumental voice instead of non-instrumental voice for tests of discriminant validity. Korsgaard & Roberson (1995) used this distinction to compare the relationship between voice and distributive justice and found that instrumental voice correlated more strongly with distributive justice compared to non-instrumental voice, although both were still positive. Likewise, it can be hypothesized that contributive justice will be more positively related to instrumental voice compared to non-instrumental voice.

Hypothesis 6: Instrumental Voice will be more related to Contributive Justice than Non-Instrumental Voice

Criterion-Related Validity Hypotheses

Following the conceptualization and discriminant validity discussion of the contributive justice measure, the next focus should be on establishing criterion-related validity by examining the expected relationships between contributive justice and other variables. This will help to also

establish the nomological network of contributive justice, by showing the constructs related to contributive justice and the interrelationships between those constructs. To do so, contributive justice and other variables will be measured at the same time and the correlation between them will be observed.

Due to the large number of potential variables that may have a relationship with contributive justice, it is helpful to place these variables into different categories. These categories include job-related attitudes and nonjob-related variables. The first category, job-related attitudes can be defined as "evaluations of one's job that express one's feelings toward, beliefs about, and attachment to one's job" (Judge & Kammeyer-Mueller, 2012, p. 344). Job-related attitudes are among the most studied variables in the organizational psychology field because they provide crucial information regarding the relationship an individual has with part of or the entirety of their job, in addition to being able to predict important behavior (Judge & Kammeyer-Mueller, 2012). Below, the hypothesized relationship between contributive justice and specific job-related attitudes, the rationale behind these hypotheses, and the relationship other related variables (organizational justice dimensions) have with these job attitudes will be discussed.

The first job-related attitude to discuss is one that has not been prominently studied in terms of its relationship with organizational justice, that being ***empowerment.*** Empowerment, or specifically psychological empowerment in the workplace, can be defined as a motivational construct manifested in four cognitions: meaning, competence, self-determination, and impact (Spreitzer, 1995). Spreitzer (1995) notes that these cognitions reflect an active orientation to a work role, which involves an orientation in which an employee wishes and feels able to shape his or her work role and context. The cognition of meaning reflects the same construct as meaningful

work, while competence involves one's perception that they are capable of performing their work activities. Self-determination involves one's perception that they have autonomy and freedom in how they do their job, and impact involves one's perception that they have an influence over what happens in their workgroup (Spreitzer, 1995). Spreitzer (1995) then discusses how possible antecedents to empowerment include self-esteem, access to information, and locus of control and found that the first two were significantly related to empowerment. The consequences of empowerment have also been established, as the Dewettinck et al. (2003) review noted that empowerment was positively related to job performance, job satisfaction, and organizational commitment, particularly for lower-level and mid-level employees.

Based on the definition and construct development of contributive justice, it can be posited that contributive justice will be positively related to empowerment. This is mainly because contributive justice can help to improve self-esteem by providing the opportunity for individuals to contribute to a higher degree at work through complex labor and participation (Gomberg, 2007). Self-esteem is an important antecedent for empowerment because those who have higher self-esteem are more likely to also consider themselves to be competent in work-related tasks and that they have talents that are worth contributing to the organization (Bandura, 1977; Gist & Mitchell, 1992). Contributive justice can help to boost one's perceptions that they are capable and competent because it provides the opportunity for individuals to develop and utilize their skills and abilities in their work tasks, which increases perceptions they that can contribute to the organization. Contributive justice can also help to boost one's perceptions that they can make an impact and have influence in their work group since they would be provided with the opportunity to participate in decisions that affect their work group. There have not been many studies that have examined the relationship between empowerment and other

organizational justice dimensions and the few that have found varying strengths of the relationship (Najafi et al., 2011; Lee, Kim, & Kim, 2016). Contributive justice in particular may be more related to empowerment compared to the other organizational justice dimensions because of how contributive justice can influence perceptions of competence, self-determination, and impact because of its focus on job tasks, participation, and one's overall capability to contribute.

Another job-related attitude to discuss is ***inclusion***, inclusion can be considered the degree to which an employee is accepted and treated as an insider by others in a work system (Hope Pelled et al., 1999). Mor Barak and Cherin (1998) suggest that inclusion can be indicated by an individual's involvement in workgroups, access to information and resources, and participation in decision-making processes. Given this, inclusion requires one to have some degree of influence in organizational functioning and this degree of influence is most likely going to depend on job characteristics and social relations (Shore et al., 2011). If one is in a position where their job allows them to be familiar with and make decisions regarding organizational norms and procedures, then they are much more likely to perceive workplace inclusion because they have access to information/resources and can participate in the decision-making processes (Stamper & Masterson, 2002). Given these job characteristics, this individual would also be more involved in the workgroup because of their knowledge and resources, which will strengthen social relations they have with other coworkers and thus increase perceptions that they are accepted and treated as an insider. While workplace inclusion may seem like a straightforward construct on the surface, certain inequalities of inclusion exist when there is a lack of contributive justice in the organization.

This is because the focus of previous inclusion research and practices in organizations is only on *what* one contributed based on their job characteristics and not what one *is able* to contribute based on their job characteristics. Without this consideration, if one perceives low levels of workplace inclusion then it is likely for others to attribute this lack of inclusion to that individual not being involved in the workgroup or not participating in decision-making when in actuality there was a lack of inclusion because the individual was not *able* to be as involved in the workgroup, receive access to information and resources, or participate in decision-making with their current job characteristics. Therefore, it needs to be recognized that there may be a barrier to inclusion in the workplace for many individuals, not because these individuals are not involved with or participating in the workgroup out of choice or ability, but because they are not able to due to lack of opportunities. This barrier to inclusion can be alleviated by contributive justice, as the opportunity to contribute complex labor and the opportunity to participate in decision-making processes would help to facilitate inclusion in the workplace.

First, the opportunity to contribute complex labor should increase the extent to which one is able to be involved in the workgroup. This is because contributing complex labor would increase the variety, meaningfulness, goals, and the type of work one is capable of, which would also in turn increase the involvement and engagement one has with their work and workgroup (Kahn, 1990; Chalofsky, 2003; Allan et al., 2019). Second, contributive justice would allow individuals to have the opportunity to participate in decisions regardless of their job characteristics, as well as receive the necessary information for not only the decision but also for organizational norms and procedures in part due to increased involvement and engagement in their job. Therefore, it can be hypothesized that contributive justice will have a positive relationship with workplace inclusion.

Given the increased interest as of late in Diversity, Equity, and Inclusion (DEI) research in organizations, it is imperative to further examine the relationships that other variables like organizational justice have with inclusion. Surprisingly, there is very little research conducted on the relationship between organizational justice and workplace inclusion. Therefore, the extent to which each organizational justice dimension is related to workplace inclusion remains mostly unknown. Given that contributive justice is the organizational justice dimension most focused on addressing inequalities in the workplace through providing equal opportunities to contribute to core work processes, then it can be posited that contributive justice may be one of the most important organizational justice dimensions for increasing inclusion in the workplace. Measuring the relationship between not only contributive justice and inclusion but all the organizational justice dimensions and inclusion will increase understanding of how and why inclusion can be increased.

Hypothesis 7: Contributive Justice will be positively related to the job-related attitudes of (a) Empowerment and (b) Inclusion.

The last job-related attitude to discuss is one that, unlike the other job-related attitudes, is expected that have a negative relationship with contributive justice. That attitude is ***work alienation***, which has been previously noted to be a multidimensional construct, with Mottaz (1981) stating that the dimensions of self-estrangement, powerlessness, and meaninglessness comprised work alienation. In particular, self-estrangement has been given the most attention in terms of work alienation dimensions (Seeman, 1975) while the task conditions of powerlessness and meaninglessness are thought to be important determinants of self-estrangement (Seeman, 1975; Mottaz, 1981). Future scholars later considered work alienation to be a unidimensional construct comprising only of self-estrangement (Nair & Vohra, 2009). Self-estrangement is

defined by Mottaz (1981) as a lack of intrinsic fulfillment in work, in which the work itself is not rewarding but simply a means to some other end (such as a salary). Nair and Vohra (2009) go on to provide a similar definition in that work alienation is the estrangement, or disconnection from work, the context, or self. Powerlessness and meaninglessness can lead to more feelings of self-estrangement as it is thought that fulfilling work requires a certain degree of autonomy and sense of purpose in the work tasks and when there is a lack of these conditions, workers are neither able to fully utilize their skills and abilities nor experience a sense of accomplishment in work. (Blauner, 1964; Mottaz, 1981).

In regard to the relationship between contributive justice and self-estrangement, it can be posited that there will be a significant negative relationship. This is because contributive justice is focused on creating a better working experience for employees through equal opportunities to contribute complex labor and participate in decision-making processes. These opportunities should allow employees to be more capable of achieving meaningful and ultimately fulfilling work, thus reducing perceptions of meaninglessness. Complex labor opportunities not only allow individuals to use their skills and abilities in their work tasks but also the tasks themselves become more interesting and engaging compared to when the tasks were routine and simple. Participation opportunities can also help increase feelings of fulfillment with one's work as they allow individuals to voice their opinions and be involved in decision-making processes, thus increasing the impact of their work. Additionally, these opportunities should ideally also help to increase an individual's control over task activities, which would help to reduce perceptions of powerlessness. In short, the opportunities presented by contributive justice should help to increase a sense of fulfillment in one's work and thus would be negatively related to self-estrangement, which is capturing the lack of intrinsic fulfillment in work.

Hypothesis 8: Contributive Justice will be negatively related to Work Alienation.

Following the discussion of job-related attitudes and behaviors, the next variable category for establishing the criterion-related validity of contributive justice is nonjob-related variables. These variables, as the name implies, are not measuring attitudes/perceptions/behaviors regarding work specifically but are instead measuring general attitudes/perceptions/behaviors regarding one's life as a whole. It is important to measure these variables in addition to job-related variables as one can argue that a construct that is only relevant to job-related aspects is less impactful and important compared to a construct that is relevant and related to both job-related and general/life aspects outside of work. The aim of implementing contributive justice in organizations is not only to increase the quality of one's work but also to improve the quality of one's life as well.

The first nonjob-related variable to discuss its relationship with contributive justice is ***psychological well-being***. Psychological well-being is a critical component of an individual's overall mental health and can be considered as a combination of positive relationships with others, autonomy, personal mastery, a feeling of purpose and meaning in life, and personal growth and development (Ryff, 1989). The centrality and time spent at work in one's life suggests that work can play an important role in determining one's psychological well-being. This has been established through research findings that job satisfaction and meaningful work are positively related to psychological well-being (Allan et al., 2018; Arnold et al., 2007). When examining the reasons behind these findings, it may be that the positive aspects of work (relationships, meaningfulness, fulfilling tasks) help to increase these aspects outside of work as well, facilitating greater psychological well-being.

Based on the conceptualization of contributive justice, it is expected that there would be a positive relationship between contributive justice and psychological well-being. The equal opportunity to contribute complex labor would help to strengthen one's personal mastery (and autonomy in some cases), facilitate personal growth and development, and ultimately strengthen the purpose and meaning in one's life, all of which are determining factors for psychological well-being (Ryff, 1989). This is because the equal opportunity to contribute complex labor allows one to use their skills and abilities to their full potential, allows them to develop and learn new skills and abilities and engage in more meaningful and fulfilling tasks at work. As for the equal opportunity to participate in decision-making processes, it can help to strengthen the positive relationships one has with others, as well as facilitate personal growth and development. This is because the equal opportunity to participate brings one closer to their work group by sharing thoughts and ideas and allows them to make decisions that benefit the group as a whole, which ultimately creates positive relationships with coworkers. These positive relationships in addition to developing one's thoughts, ideas, and decision-making abilities through participation are likely to strengthen the purpose and meaning in one's work, thus resulting in greater psychological well-being. Taken together, it can be hypothesized that contributive justice will be positively related to psychological well-being.

As for previous organizational justice research, there has been little done on the relationship between organizational justice and psychological well-being as research has focused almost exclusively on job-related variables. However, contributive justice should be different in the regard that it is much more focused on the content of one's work and job and promoting/facilitating the contribution of complex labor and participation in decision-making processes. As previous research has established, what one does at work can have massive

implications for their overall mental and physical health. Examples of this are shown through findings that what one does at work affects self and social esteem, self-development, cognitive capacities, leisure activities, participation in society, and sense of purpose in life, among many others (Murphy, 1993; Gomberg, 2007; Timmermann, 2018). Contributive justice can help to positively change what one does at work, more so than the other organizational justice dimensions. Being able to not only develop but also use complex skills and abilities in practice can help to increase many aspects of one's life, particularly cognitive capacities, choice of leisure activities, self-development, and self-esteem. Being able to participate in decisions at work can also help to increase self-esteem as well as greater participation in society. The combination of both can increase the sense of importance and meaningfulness of one's work, ultimately helping to shape a sense of purpose in life, leading to greater psychological well-being.

Another important nonjob-related variable that was previously discussed when reporting the previous research on contributive justice is ***self-esteem***. Self-esteem refers to an individual's subjective evaluation of one's worth which encompasses beliefs about oneself (Hewitt, 2009). Individuals with greater self-esteem tend to have more positive feelings about themselves compared to individuals with lower self-esteem. Maslow (1987) described individuals as having two different types of esteem, one being the need for respect from others in the form of recognition, success, and admiration and the other being the need for self-respect in the form of self-love, self-confidence, skill, or aptitude. Self-esteem has previously been shown to have positive relationships with self-reported happiness and emotional stability (Baumeister et al., 2003; Zeigler-Hill et al., 2015). Contributive justice is expected to have a positive relationship with self-esteem for multiple reasons. First, the equal opportunity to contribute complex labor allows individuals to develop and utilize their knowledge, skills, and abilities at work, providing

them with a sense of mastery, completion, and competence. This can help to increase one's self-respect and overall sense of worth as an individual. Second, the equal opportunity to contribute complex labor will also increase one's recognition and respect by others (particularly coworkers), who value the contributions that were made by that individual, which would be greater than the contributions one could make to the organization without the opportunity to contribute complex labor. Similarly, the equal opportunity to participate in decision-making processes can also help to increase self-respect and respect from others as it represents that the organization cares about an individual's specific suggestions and opinions regarding decisions. This can then lead to that individual feeling valued by their organization and co-workers, thus increasing perceptions of worth. Therefore, I hypothesize that contributive justice will have a significant positive relationship with self-esteem.

Hypothesis 9: Contributive Justice will be positively related to the nonjob-related variables of (a) Psychological Well-Being, and (b) Self-Esteem.

To summarize the construct of contributive justice, it involves two dimensions, (1) the equal opportunity to contribute complex labor and (2) the equal opportunity to participate in decision-making processes. However, contributive justice also captures subdimensions for both complex labor and participation that are necessary for individuals to have the ability to contribute to a high degree. Tables 1 and 2 provide a succinct description of both dimensions/subdimensions. Both dimensions of contributive justice help to promote greater fairness in the organization while addressing areas of fairness that are not adequately addressed in other organizational justice dimensions or related measures. Following the development of the construct of contributive justice, hypotheses were developed by analyzing the expected discriminant validity of contributive justice, such as how it is a different construct than

meaningful work, employee voice, and the other organizational justice dimensions. Further hypotheses were established by analyzing the expected criterion-related validity of contributive justice by examining the expected relationships between contributive justice and other variables, in particular the more understudied (in respect to organizational justice) variables such as inclusion, empowerment, and psychological well-being. Table 3 provides a description of these hypothesized relationships between contributive justice and other constructs. Now that the construct of contributive justice and the hypotheses have been established, a method for the development of the contributive justice measure and for testing the hypotheses will be discussed.

Method

Scale Development

The contributive justice measure was developed following the procedures outlined by Hinkin (1998), which included the following steps: (1) item generation, (2) questionnaire administration, (3) initial item reduction, (4) confirmatory factor analysis, and (5) convergent/discriminant validity testing. The first step, item generation, is most often completed using one of two methods, which are deductive and inductive approaches. A deductive approach "requires an understanding of the phenomenon to be investigated and a thorough review of the literature to develop the theoretical definition of the construct under examination" (Hinkin, 1998, p. 4). Following the development of the definition, the definition is then used as a guide for the development of items (Schwab, 1980). Hinkin (1998) goes on to propose that a deductive approach is appropriate when a theoretical definition already exists, while an inductive approach is appropriate when conducting exploratory research and when the theoretical definition is not defined. Based on these suggestions, the items for the contributive justice measure were developed using a deductive approach based on the definition of contributive justice along with the dimensions/subdimensions of contributive justice that were established earlier in the thesis.

When developing items, it is necessary to ensure that items are of high quality by using specific guidelines. These guidelines include but are not limited to: being simple and as short as possible, using familiar language for the target audience, asking about only a single issue/construct, being free of bias such as asking a leading question, using carefully worded language to assure appropriate interpretation, including positively worded and negatively worded (reverse coded) items, and lastly avoiding items that all respondents would answer similarly to, which would result in little to no variance (Hinkin, 1998). Using these guidelines, one can begin

to generate items using the deductive approach discussed earlier. In order to determine the number of items to administer, it is necessary for the domain of the construct to be fully covered while also avoiding inducing fatigue in respondents by having too many items (Schmitt & Stults, 1985; Hinkin, 1998). In keeping with this principle, 3 items were generated for each subdimension, except for the opportunity subdimension, which had 4 items across the two dimensions of contributive justice (complex labor and participation), for a total of 26 initial items for the contributive justice measure. For each category, there were two regularly coded items (three for the opportunity subdimensions) and one reverse-coded item. The initial items for the contributive justice measure are shown in Table 4.

In terms of the response options for the items (or the item scaling), it is important to allow there to be variance in the responses. This can be achieved by having a response scale with equal appearing intervals, such as a 5-, 7-, or 9-point scale with a neutral midpoint (Likert, 1932; Hinkin, 1998). The current organizational justice dimensions by Colquitt (2001) use a 5-point Likert scale, anchored by 1= To a small extent and 5= To a large extent. Therefore, to reduce the likelihood that differences between the contributive justice measure and the other organizational justice dimensions are simply due to differences in the rating scale and response format or question stem, the contributive justice measure also used the same response format and rating scale as the Colquitt (2001) organizational justice scales, while keeping the same question stem as “To what extent:”.

Following the initial set of items being generated, the next step in the item generation phase is establishing content validity. This is most often done by asking others who are familiar with the area being measured (Subject Matter Experts) to rate each item according to how closely it aligns with the theoretical definition of the construct (Schriesheim et al., 1993; Hinkin,

1998). In doing so, items that are not rated to be closely aligned with the theoretical definition can be removed prior to administering the items to participants, which ensures that the remaining items are measuring the construct accurately. Polit and Beck (2006) state that item ratings should be done on a 4-point ordinal scale, and that the most often used rating continuum is the continuum advocated by Davis (1992) of 1 = not relevant, 2 = somewhat relevant, 3 = quite relevant, 4 = highly relevant. In total, one SME (a graduate student) rated the items and all the items received adequate ratings (all items were rated as quite relevant or highly relevant for their dimension). As a result, all 26 of the initial contributive justice items were administered to participants.

Sample

Following the generation of items according to these guidelines, the next step involves administering the contributive justice items to the population that it is intended for, in addition to administering the other measures discussed that are needed for establishing discriminant and criterion-related validity. For the contributive justice measure, that population would be employed individuals who work full-time at an organization with other coworkers. Therefore, individuals who are not employed full-time in an organization (i.e., individuals who are self-employed or independent contractors) were excluded from the sample. As this is the initial development of the contributive justice measure, it is helpful to capture a broad spectrum of full-time employees, rather than a more restricted sample. Therefore, it must be recognized that certain individuals are much more likely to be able to contribute to their organization than others, such as managers/supervisors and those with advanced academic degrees (Master's and higher). If the sample is made up of many of these individuals, it may skew the results of the contributive justice measure by the measure having a high mean and low variance. Therefore, these

individuals were excluded from the sample, in order to capture a sample that will have more variability in their opportunity to contribute in their organizations.

Considering the need to run exploratory and confirmatory factor analyses for the contributive justice measure, the sample size needs to be adequate enough to successfully run these analyses. The minimum sample size for confirmatory factor analysis (CFA) varies but typically ranges from 150-250 participants, with the greater number of participants increasing the confidence in the accuracy of the results of the CFA (Hoelter, 1983; Muthén & Muthén, 2002). In total, the funding I received allowed me to recruit 534 participants.

Procedure

Following the data being collected, the third step of scale development by Hinkin (1998) is initial item reduction, which is done through exploratory factor analysis (EFA). Typically, a principal-axis factoring method of factor analysis is recommended as it creates a more parsimonious representation of the set of items, which assists in providing evidence of construct validity (Ford et al., 1986; Guadagnoli & Velicer, 1988). There are also multiple options to use as the rotation method in EFA, depending on whether or not factors are anticipated to be correlated with one another. As it is expected that the complex labor and participation dimensions of contributive justice will be positively correlated with one another, I used the oblique rotation method for my analyses (promax in SPSS). Exploratory factor analysis will result in a number of factors being extracted, which represent the dimensions of the construct that the items are measuring.

In determining the number of factors to extract, common methods include Eigenvalues of greater than 1 (Kaiser criterion) and a scree plot test of the percentage of variance explained (Cattell, 1966; Hinkin, 1998). In determining which items to retain following exploratory factor

analysis, it is necessary to evaluate the factor loadings of each item, with the .40 criterion level being commonly used in judging factor loadings as meaningful and thus retained (Ford et al., 1986). More recent suggestions (Worthington & Whittaker, 2006) on the other hand suggest .32 as being the factor-loading cut-off, while also evaluating if there are any significant cross-loadings for the item (having a factor loading of >.32 on more than a single factor). However, this is not a strict cut-off for retaining items, as there are other factors to consider including the item's communality, which is the proportion of variance in the variable explained by each of the items (Hinkin, 1998). Other considerations for retaining items include examining the item-total correlation, which is the degree to which the item correlates with all other items in the scale, with higher item-total correlations being desirable. Hinkin (1998) notes that it may be beneficial to examine item-total correlation prior to conducting EFAs, as it reduces the number of items and removes lower-performing items. Considering first the item-total correlations, and then factor loadings, cross-loadings, and communalities (following Worthington & Whittaker, 2006), items were removed, and the analysis was run again until all items were in the desirable strength and direction according to these criteria.

Generally, it is considered good practice to use a combination of methods to determine the number of factors to extract, which is why for the contributive justice measure I used a combination of Eigenvalues and the scree plot to determine the number of factors to extract. These analyses were used to test hypotheses 1 and 2. Once a set of items was determined through exploratory factor analysis, reliability analysis was also conducted on the remaining set of items to assess the reliability of the measure. The type of reliability analysis used is typically internal consistency reliability using Cronbach's alpha (Price & Mueller, 1986). Coefficient alphas are usually interpreted as .70 being adequate, .80 being good, and .90 being excellent, with .70 being

the suggested absolute minimum for newly developed measures (Hinkin, 1998; George & Mallery, 2003).

Following exploratory factor analysis and reliability analysis, the next step in the measure development process is confirmatory factor analysis, which helps to determine how well each item fits the factor that it is intended to capture. The goodness of fit was assessed with a number of indices, including the chi-square statistic and accompanying p-value, Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root-Mean-Squared-Error of-Approximation (RMSEA), and Standardized Root Mean Residual (SRMR). The recommended values that indicate good fit for these indices include a non-significant p-value for the chi-square statistic (although this is sensitive to sample size, so other fit indices are prioritized), CFI and TLI values higher than .95; RMSEA values lower than .06 (or at least lower than .08); and SRMR values lower than .08 (Fabrigar et al., 1999; Hu & Bentler, 1999; Kline, 2011). Reaching these values for the various fit indices likely indicates good model fit, and that the items are indeed representative of the construct that is attempting to be measured.

To fully test hypotheses 3-5, further analyses were conducted to provide evidence of discriminant validity. These analyses involved conducting additional CFAs and comparing them to each other, with the difference between the CFAs being the number of latent factors that are in the model. For example, one CFA would test a model where there are 3 factors, one for each contributive justice dimension and a separate factor representing the other variable of interest (e.g., meaningful work). This CFA would be compared to a model where there are only 2 factors, as one of the contributive justice dimensions would be loading onto the same factor as the other variable of interest, instead of each variable having its own separate factor. The model fit would then be compared between the 3-factor model and the 2-factor model. If the model fit was

superior in the 3-factor model compared to the 2-factor model it indicates that the contributive justice dimension is not loading onto the same factor as the other variable and instead that contributive justice loads better as its own construct, thus providing evidence of discriminant validity.

The difference in model fit was determined by analyzing the results of the chi-square difference test, in which a critical value will be determined by the difference in degrees of freedom between the two models (at the .05 probability level). If the difference in chi-square exceeds the critical value, it indicates that there is a significant difference in fit between the two models, with the model with more factors fitting significantly better than the model with fewer factors. If the difference in chi-square does not exceed the critical value, it indicates there is not a significant difference in fit between the two models, and the model with fewer factors can be retained. Additionally, fit statistics such as CFI/TLI, RMSEA, and SRMR can be compared between different models, but these comparisons would not provide a significant value as the chi-square difference test would, and as such these comparisons should simply complement that chi-square difference test. Table 5 details all the model comparisons that were analyzed to evaluate hypotheses 3-5.

Testing for criterion-related validity involved examining the correlations between other measures and the contributive justice measure that was developed/finalized in the EFA and CFA. The results of the correlations between the established measures and the contributive justice measure provided the strength and direction of the relationship between the two measures. These correlations were compared with the hypothesized relationship between the contributive justice measure and the established measure, to evaluate if the hypothesis was supported or not. Following this comparison, theoretical explanations were included to explain why the

relationship between the contributive justice measure and the established measure resulted in the manner it did. The correlations between the established measures below and the contributive justice measure were examined to test hypotheses 6-9.

Measures

***Distributive Justice*.** Distributive Justice was measured using 4 items from Colquitt (2001). Items are measured on a 5-point Likert scale ranging from 1= "To a small extent" to 5= "To a large extent". An example item is: "To what extent does your compensation and other provided resources reflect the effort you have put into your work?" This measure of distributive justice has displayed strong internal consistency reliability (α=.93) as well as criterion-related validity (Colquitt, 2001).

Procedural Justice. Procedural justice was measured using 7 items from Colquitt (2001). Items are measured on a 5-point Likert scale ranging from 1= "To a small extent" to 5= "To a large extent". An example it is: "To what extent are organizational policies and procedures consistently applied?" This measure of procedural justice has displayed strong internal consistency reliability (α=.93) as well as criterion-related validity (Colquitt, 2001).

***Interpersonal Justice*.** Interpersonal Justice was measured using 4 items from Colquitt (2001). Items are measured on a 5-point Likert scale ranging from 1= "To a small extent" to 5= "To a large extent". An example item is: "To what extent does your supervisor/manager treat you with respect?". This measure of interpersonal justice has displayed strong internal consistency reliability (α=.92) as well as criterion-related validity (Colquitt, 2001).

***Informational Justice*.** Informational Justice was measured using 5 items from Colquitt (2001). Items are measured on a 5-point Likert scale ranging from 1= "To a small extent" to 5= "To a large extent". An example item is "To what extent has your supervisor/manager been candid in

their communications with you?". This measure of informational justice has displayed strong internal consistency reliability (α=.90) as well as criterion-related validity (Colquitt, 2001).

***Meaningful Work*.** Meaningful work was measured using 6 items developed by May, Gilson, & Harter (2004). Items are measured on a 5-point Likert scale ranging from 1= "Strongly Disagree" to 5= "Strongly Agree". An example item is: "The work I do on this job is meaningful to me". This measure of meaningful work has displayed strong internal consistency reliability (α=.90) as well as criterion-related validity (May, Gilson, & Harter, 2004).

***Instrumental Voice*.** Instrumental voice was measured using 5 items adapted from Korsgaard and Roberson (1995). Items are measured on a 5-point Likert scale ranging from 1= "Strongly Disagree" to 5= "Strongly Agree". An example item is: "I feel I can introduce new topics during team discussions.". This measure of instrumental voice has displayed adequate internal consistency reliability (α=.79) as well as criterion-related validity (Korsgaard & Roberson, 1995).

***Non-Instrumental Voice*.** Non-instrumental voice was measured using 8 items adapted from Korsgaard and Roberson (1995). Items are measured on a 5-point Likert scale ranging from 1= "To a very small extent" to 5= "To a very large extent". An example item is: "To what extent do you make suggestions about how your job might be done differently?" This measure of non-instrumental voice has displayed good internal consistency reliability (α=.86) as well as criterion-related validity (Korsgaard & Roberson, 1995).

Empowerment. Empowerment was measured using 9 items from Spreitzer (1995). Empowerment has the three subscales of competence, self-determination, and impact which will each be measured by 3 items. All items are measured on a 7-point Likert scale ranging from 1= "Strongly Disagree" to 7= "Strongly Agree". An example item for competence is: "I am

confident about my ability to do my job". An example item for self-determination is: "I have considerable opportunity for independence and freedom in how I do my job". An example item for impact is: "I have significant influence over what happens in my work group". Each subscale (in order of competence, self-determination, and impact) has displayed good internal consistency reliability (α=.81, α=.81, α=.88) as well as criterion-related validity (Spreitzer, 1995).

***Inclusion*.** Inclusion was measured using 10 items from Chung et al. (2020). Items are measured on a 5-point Likert scale ranging from 1= "Strongly Disagree" to 5= "Strongly Agree". An example item is: "I am treated as a valued member of my work group". This measure of inclusion has displayed strong internal consistency reliability (α=.94) as well as criterion-related validity (Chung et al., 2020).

Work Alienation. Work alienation was measured using 7 items adapted from the self-estrangement scale developed by Mottaz (1981). Items will be measured on a 5-point Likert scale ranging from 1= "Strongly Disagree" to 5= "Strongly Agree". An example item is: "I do not feel a sense of accomplishment in the type of work I do". This measure of work alienation has displayed good internal consistency reliability (α=.88) as well as criterion-related validity (Mottaz, 1981).

***Self-Esteem*.** Self-esteem was measured using 10 items from the Rosenberg Self-esteem scale (Rosenberg, 1979). Items are measured on a 4-point Likert scale ranging from 1= "Strongly Disagree" to 4= "Strongly Agree". An example item is: "I feel that I have a number of good qualities". This measure of self-esteem has displayed good internal consistency reliability (α=.88) as well as criterion-related validity (Robins, Hendin, & Trzesniewski, 2001).

Psychological Well-Being. Psychological Well-Being was measured using 8 items from Diener et al. (2009). Items are measured on a 7-point Likert scale ranging from 1= "Strongly Disagree"

to 7= “Strongly Agree”. An example item is: “I am competent and capable in the activities that are important to me”. This measure of psychological well-being has displayed good internal consistency reliability (α=.86) as well as criterion-related validity (Diener et al., 2009).

Demographics. Demographics questions were included in the survey and are shown in Appendix C. These questions pertained to participant’s race, sex, work experience, annual income level, age, job industry, job position/level, and educational attainment.

Results

Sample Demographics

The demographic statistics of the study sample are shown in Table 6. The sample can best be characterized as being mostly young (82% are less than 40 years old) and college-educated, but without extensive work experience or high levels of income. However, there are still considerable proportions of the sample who were not college educated (36%) or who had 10 or more years of work experience (35%). Additionally, there was a mixture of different occupational categories, as well as job positions/levels. Lastly, there was a notable degree of diversity among race (43% are non-White) and sex (almost 50% male, 50% female).

Initial Reliability Analysis

I conducted the majority of the analyses using SPSS 28.0. First, I ensured that there was no missing data and that respondents correctly answered the attention check questions and reasonably answered the free response question. Next, I reverse coded the items from the various measures that required them, creating separate variables to be used in future analyses. I then computed mean scores and internal consistency reliability for all the measures except for the contributive justice items. With the contributive justice items, I first ran reliability analyses to investigate item and item-total statistics. I ran reliability analyses separately for the 13 complex labor items and the 13 participation items. First, for the complex labor items, item-total correlation results revealed considerably low item-total correlations for items 4, 7, 8, 10, and 13 compared to the rest of the complex labor items (which ranged from .55 to .68). Four of these five items were negatively worded items for complex labor, except for item 8. Therefore, I went back to confirm that these items were reverse coded correctly prior to running the analyses. On ensuring that all items were reverse coded correctly, I followed recommendations from Kim and

Mueller (1978), dropping three items (4, 7, and 8) prior to the exploratory factor analysis due to having low item-total correlations below .40. I followed the same procedure for the participation items, finding that only one item (item 17, negatively worded) was below .40 for item-total correlation, although the other negatively worded participation items had considerably lower item-total correlations compared to the positively worded participation items (which ranged from .65 to .77). Therefore, item 17 was dropped prior to the exploratory factor analysis for the participation items.

Construct Validity

To examine the factor structure for the contributive justice items, I conducted exploratory factor analysis separately for the complex labor and participation items before looking at the exploratory factor analysis for the items combined. All exploratory factor analyses were conducted using principal axis factoring as the extraction method, with an oblique rotation method (promax in SPSS) to allow factors to correlate. The criterion for factor extraction was set as Eigenvalues greater than 1.0, and scree plots were also included in analyses. Starting with the 10 complex labor items, 3 factors were extracted having eigenvalues greater than 1.0. Despite this, the first factor had the majority of the variance (47.75%) compared to the second/third factors (~10% each). The break ("elbow") in the scree plot also indicated that there was most likely only a single factor. The first factor contained items from the opportunity and task quality subdimensions. The second factor contained items from the training and support subdimensions. The two negatively worded items (10 and 13) were the only items loading onto the third factor and were therefore dropped from further analyses, as a factor is recommended to have a minimum of 3-4 items to have a stable factor structure (Hair et al., 2010; Harvey, Billings, & Nilan, 1985). A second factor analysis on the remaining 8 complex labor items resulted in a

single-factor solution, with the primary factor being responsible for 55% of the variance. These 8 complex labor items would be used in further analyses following the EFA on the participation items.

The first EFA on the 12 participation items resulted in a two-factor solution, with the first factor explaining 54.61% of the variance. The break in the scree plot also suggested that there was most likely only a single factor. Similarly to the complex labor items, the only items loading onto the second factor were the three negatively worded items (items 20, 23, and 26) and therefore these three items were dropped from future analyses. A second EFA on the remaining 9 participation items resulted in a single-factor solution, with the first factor being responsible for 64.70% of the variance. Following this confirmation that both complex labor and participation were single factor measures independently, the next EFA was conducted using the 8 complex labor items and 9 participation items combined to evaluate whether complex labor and participation were distinct dimensions from one another.

The initial EFA results on the combined contributive justice items resulted in a three-factor solution, as shown in Table 7. The first and third factors contained exclusively participation or complex labor items, but the second factor had a mixture of both participation and complex labor items. Upon further review, many of the participation items that either primarily or secondarily loaded onto this mixed second factor had significant cross-loadings with the first factor. These were items 18, 19, 22, 24, and 25. Previous suggestions by Worthington and Whittaker (2006) stated that items that have a factor loading of $\geq .32$ on two or more factors should be removed to preserve simple structure (McDonald, 1985). Following these recommendations, these items along with item 9 which had a factor loading of below .32 on its primary factor were removed from the analyses and a subsequent EFA was conducted.

Upon removal of these items, the resulting EFA on the remaining 11 items provided a 2-factor solution, with the 1st factor (Eigenvalue of 5.98) resulting in 54.37% of the variance and the 2nd factor (Eigenvalue of 1.18) resulting in 10.69% of the variance, for a cumulative 65.06% of the variance being explained by these two factors. The results of this EFA are shown in Table 8. The 1st factor contained items from the complex labor dimension of contributive justice, including 3 opportunity items, 2 training items, and 2 support items. There were no significant cross-loadings of these items with the second factor. The 2nd factor contained items from the participation dimension of contributive justice, including 3 opportunity items and 1 consideration item. Likewise, there were no significant cross-loadings for the complex labor items with the participation items. These 11 items all had adequate factor loadings (>.32), and the two factors were also correlated strongly with one another (r = .68). Lastly, internal consistency reliability was computed for each factor separately as well as the combined factors. The 7-item complex labor measure had a Cronbach's alpha of .88. The 4-item participation measure had a Cronbach's alpha of .88. The 11-item contributive justice measure had a Cronbach's alpha of .91. All Cronbach's alpha values were well above the .70 minimum value, indicating good reliability (Hinkin, 1998).

To conduct Confirmatory Factor Analysis (CFA), I used SPSS AMOS Version 27. First, the 11 contributive justice items (7 complex labor and 4 participation) were included in a CFA model to confirm the dimensionality of contributive justice. The CFA estimation method used was maximum likelihood, standardized estimates were computed, and modification indices were displayed. The model was a two-factor model that had the 7 complex labor items load onto one factor and the 4 participation items load onto another factor. The factors were then correlated with each other, as per the EFA results. Lastly, the factor loading of one item from each factor

was set to 1 to allow the model to be identified. The initial results indicated that this model had mediocre to poor fit (χ^2= 511.78, df= 43, CFI: 0.876, TLI: 0.841, RMSEA: .143, SRMR: .078). Therefore, I decided to evaluate the modification indices to see if any changes to the model were necessary.

The largest modification indices suggested that the error terms for 4 item pairings should be correlated to improve model fit. These items were Items 5 and 6 (M.I. = 178.91, Par Change = 0.589), Items 2 and 3 (M.I. = 79.67, Par Change = 0.151), Items 11 and 12 (M.I. = 69.31, Par Change = 0.384), and Items 15 and 16 (M.I. = 42.37, Par Change = 0.178). Previous work has suggested that correlated error terms for items loading onto the same factor in a CFA model are acceptable if the item content is similar conceptually and/or the wording of the items is similar, as it indicates a unique variance origin of the error for these items (Brown, 2015). Following a review of these items, I decided that these pairs of items were indeed similar conceptually and worded similarly enough to warrant including correlated errors in the model. For example, items 5 and 6 were both from the training subdimension for complex labor, and both reference improving skills and abilities through one's organization providing them with opportunities/resources. Items 2 and 3 were both from the opportunity subdimension of complex labor, and both reference the individual being provided with the opportunity to engage in work tasks that utilize complex skills and abilities to the same degree as others. Items 11 and 12 were both from the support subdimension of complex labor, and both reference employees supporting the individual when they are engaging in a complex work task. Lastly, items 15 and 16 were both from the opportunity subdimension of participation, and both reference the individual discussing to the same degree as others when participating in decision-making processes.

With these modifications to the model made, I reran the CFA model, which resulted in a better-fitting model (χ^2: 134.98, df= 39, CFI: .975, TLI: .964, RMSEA: .068, SRMR: .045). The standardized factor loadings for the model are shown in Table 9. The model fit statistics found that the CFI/TLI values are above the .95 cut-off value while the SRMR value is less than the .08 cut-off (Hu & Bentler, 1999; Kline, 2011). However, the RMSEA value was above the .06 cut-off recommended by Hu and Bentler (1999) but was still below the .08 cut-off considered to be acceptable fit (Browne & Cudeck, 1992; Fabrigar et al., 1999). Considering that the majority of the fit indices (CFI, TLI, SRMR) indicated good fit, and that the RMSEA value was below .08, there was reasonable confidence that the two-factor contributive justice model is a good-fitting model of contributive justice.

An additional test of the factor structure of contributive justice was conducted, to evaluate whether contributive justice fits better as a two-factor model with complex labor and participation as separate factors, or as a single-factor model with all 11 items loading onto the same factor. This comparison was done by using a chi-square difference test in addition to comparing model fit indices to determine which model fits better. The results of this comparison are shown in Table 10. The results indicated that the single-factor CFA model (χ^2: 278.37, df= 40, CFI: .937, TLI: .913, RMSEA: .106, SRMR: .056) had a significantly worse fit compared to the two-factor CFA model (χ^2: 134.98, df= 39, CFI: .975, TLI: .964, RMSEA: .068, SRMR: .045), indicating that the 2-factor model fit significantly better than the single-factor model. The final dimensionality of the contributive justice is shown in Figure 1.

Discriminant Validity

Now that the factor structure of the contributive justice measure has been confirmed, further CFAs were conducted to test for the discriminant validity of the contributive justice

measure. To do so, the items from the four dimensions of Colquitt's (2001) organizational justice measure were included in multiple CFA models, along with the contributive justice items. Four additional factors were created, and the items from the organizational measure were made to load onto their respective factor (4 items for distributive justice, 7 items for procedural justice, 4 items for interpersonal justice, and 5 items for informational justice) and the factors were all correlated with each other (including the complex labor and participation factors). To set a baseline model, a CFA model was conducted where each item was made to load onto their respective factor, for a total of 6 factors (complex labor, participation, distributive justice, procedural justice, interpersonal justice, and informational justice). Following this baseline model, future models involved one or both of the contributive justice dimensions having their items load onto an organizational justice dimension's factor instead of loading onto their own factor. For example, one CFA model would involve the 7 complex labor items loading instead onto the distributive justice factor, while the 4 participation items remain loaded onto their own factor. This CFA model would then have five factors instead of the six in the baseline model, with distributive justice now having 11 items instead of 4 in the baseline model. These models would then be compared in the same fashion as earlier, by conducting a chi-square difference test in addition to examining fit indices.

This process was repeated for each of the four organizational justice dimensions, and later for meaningful work and instrumental voice. Each comparison only involved two models, with the baseline model always being included in the comparison with a model with fewer factors. Despite the number of factors in the model, all factors in each model were correlated with each other and all items were present in each model. Chi-square difference tests and fit indices comparisons were done for each model comparison. Results of these comparisons can be

found in Table 11 for the organizational justice dimensions and Table 12 for meaningful work and instrumental voice. The results of these model comparisons indicated that the contributive justice dimensions of complex labor and participation and the total contributive justice measure are distinct and discriminable from the four Colquitt (2001) organizational justice dimensions, meaningful work, and employee voice.

Criterion-Related Validity

Following the tests for the discriminant validity of the contributive justice measure through CFA comparisons, a test of the criterion-related validity of the contributive justice measure was conducted by correlating each contributive justice dimension as well as the total scale with the other variables in the study. Additionally, the means, standard deviations, and reliability of each variable were computed. These results are shown in Table 13. The results of the correlation analysis found that contributive justice was significantly correlated with all other variables in the study. In particular, there were strong correlations between contributive justice and the other organizational justice dimensions (procedural and informational were the strongest). For the other non-justice variables, the strongest correlations were between contributive justice and instrumental voice, inclusion, non-instrumental voice, work alienation, and meaningful work. There were also differences in the strength of correlations with other variables for the complex labor and participation dimensions. For example, complex labor was more related to meaningful work, work alienation, and psychological well-being compared to participation. Meanwhile, participation was more related to instrumental voice, empowerment, and inclusion than complex labor. Almost all the variables in the study were correlated to one another, which is not unusual considering the sample size and content of the variables. However, each of the organizational justice dimensions (distributive, procedural, interpersonal, and

informational) were NOT significantly correlated with the competence dimension of empowerment while the contributive justice dimensions and total scale were significantly (positively) correlated with competence.

With the exception of the competence dimension of empowerment (which is still a significant correlation), the contributive justice dimensions and total scale had medium to strong correlations with the other study variables. The correlation between contributive justice (and its dimensions) and instrumental voice was greater than the correlation between contributive justice and non-instrumental voice. Contributive justice was also positively correlated with empowerment (and its dimensions), inclusion, self-esteem, and psychological well-being while it was negatively correlated with work alienation.

Additional Non-Hypothesized Analyses

Although not specifically hypothesized, I decide to test the incremental validity of contributive justice compared to the other organizational justice dimensions for meaningful work, inclusion, and instrumental voice as the three major outcomes. There were two models for each outcome. Model 1 contained distributive, procedural, interpersonal, and informational justice, while Model 2 contained these four justice dimensions in addition to the total contributive justice measure. Contributive justice was entered into Model 2 last, to evaluate the change in R-Squared from Model 1 to Model 2. Results revealed that there was a significant change in R-Squared in Model 2 for meaningful work (ΔR^2 =.072, B = .345, t = 6.87, p < .01), instrumental voice (ΔR^2 =.115, B = .442, t = 10.25, p < .01), and inclusion (ΔR^2 =.122, B = .451, t = 10.22, p < .01). Contributive justice was also the strongest predictor of each outcome in Model 2.

Upon finalizing the contributive justice measure, I evaluated whether there were demographic differences in the means of the contributive justice measure. To evaluate this, I conducted One-Way Analysis of Variance tests (ANOVAs) with the contributive justice total scale and dimensions as the dependent variables and demographic variables as the factor (independent variable). I also included post-hoc tests (Tukey) for the ANOVAs to determine which group(s) had significantly different means from each other. Beginning with sex, there was no statistically significant differences between males and females for total contributive justice and complex labor, but there was a significant difference for participation ($F(1, 530)= 4.47$, $p = .035$), as females had significantly lower participation ($M = 2.81$) compared to males ($M= 3.01$). Next for race/ethnicity, the ANOVA results suggested a statistically significant difference for participation ($F(1, 532) = 5.81$, $p = .016$) but not for complex labor or total contributive justice, as Non-White participants had significantly lower participation ($M= 2.79$) compared to White participants ($M= 3.01$). Next for age, there were no statistically significant differences between the age groups for participation, but there were for total contributive justice and complex labor. For complex labor ($F(4, 529)= 2.64$, $p = .033$), the 30 to 39-year-old age group had significantly lower complex labor compared to the 20- to 29-year-old age group. For total contributive justice ($F(4, 529)= 2.49$, $p = .043$), the 30 to 39-year-old age group again had a significantly lower mean compared to the 20- to 29-year-old age group.

Next for education level, the ANOVA results indicated that there was no statistically significant difference between the groups for participation, complex labor, and total contributive justice. Next for work experience, there was no statistically significant difference between the groups for participation, but there were significant differences for complex labor and total contributive justice. For complex labor ($F(7, 526)= 2.54$, $p = .014$), the 3-to-5-year group had

greater complex labor compared to the 10-to-15-year group. Likewise for total contributive justice ($F(7, 526)= 2.34$, $p = .023$), the 3-to-5-year group had a greater contributive justice mean compared to the 10-to-15-year group. Next for income level, the ANOVA results indicated that there was a statistically significant difference between the groups for complex labor ($F(3, 512) = 6.97$, $p = <0.01$), participation ($F(3, 512) = 5.27$, $p = 0.01$), and total contributive justice ($F(3, 512) = 7.23$, $p = <0.01$). The post-hoc Tukey test revealed that for complex labor, the $0-30k group had a significantly lower mean compared to the $30-60k group and the $60-100k group. For participation, the $0-30k group had a significantly lower mean compared to the $60-100k group. Lastly, for total contributive justice, the $0-30k group had a significantly lower mean compared to the $30-60k group and the $60-100k group.

Next for job industry, the ANOVA results indicated that there was no statistically significant difference between the groups for complex labor, participation, and total contributive justice. Lastly, for job position/level, the ANOVA results indicated that there was a statistically significant difference between the groups for complex labor ($F(6, 527) = 5.80$, $p = <.01$), participation ($F(6, 527) = 7.63$, $p = <.01$), and total contributive justice ($F(6, 527) = 7.43$, $p = <.01$). The post-hoc Tukey test revealed that for complex labor, the administration/support staff group had a significantly lower mean compared to the trained professional and technician groups. For participation, the administration/support staff group had a significantly lower mean than the management, trained professional, and technician groups, while the sales group also had a significantly lower mean than the management group. Lastly, for total contributive justice, the administration/support staff group had a significantly lower mean than the management, trained professional, and technician groups.

There are a few additional notes to make about the results of the study before moving on to the theoretical and practical implications of the findings. First, as mentioned in the results section, several items (that were mainly negatively worded) had poor item-total correlations, indicating that they were not measuring the same construct as the other items. However, one of these items with a poor item-total correlation was positively worded, which was item 8: "Are boring and menial work tasks shared among employees?". There are a few reasons why this item may not have been related to the other complex labor items. The first is that this item is the only item that does not reference the organization "does your organization" or the individual "do you". Second, unlike the other items, it refers to a negative aspect of work: "boring and menial work tasks" being shared by employees, instead of the equal opportunity for a positive aspect of work (improve/utilize complex skills and abilities). Both these facts suggest that participants may have had a different frame of reference when responding to this item compared to the other items. Boring and routine/menial work tasks being shared is an important aspect of contributive justice discussed by previous scholars (Gomberg, 2007; Sayer, 2009; Timmermann, 2018), and as such this item may have a better item-total correlation if it was re-worded to be consistent with the other complex labor items. For example, this item could be re-worded to: "Does your organization ensure that employees share to some extent boring and menial work tasks, allowing all individuals to have the opportunity to engage in more skilled and interesting work tasks?". A rephrased item such as this could potentially have better item-total correlation and load onto the same factor as the other complex labor items.

The other items that did not have adequate item-total correlations were all negatively worded. Additionally, the negatively worded items that did have adequate item-total correlations loaded onto their own factor instead of the primary factor that all the other positively worded

items loaded onto for complex labor and participation, respectively. One possible reason for this finding is that previous research has suggested that participants do not appropriately comprehend negatively worded statements in the same manner as positively worded statements (Barnette, 2000; Chyung, Barkin, & Shamsy, 2018; Dalal & Carter, 2015). Several explanations for this finding have been posited, including participant expectations, biases, reading levels/intellectual capacity, carelessness, and/or fatigue. This problem is further exacerbated when there are only a few negatively worded items in a scale compared to a more even split of negatively and positively worded items, as participants expect and have the mindset that all future items will be positively worded after previously viewing several positively worded items in the scale and therefore can have trouble mentally processing these few negatively worded items (Roszkowski & Soven, 2010). Lastly, the overall psychometric quality of negatively worded items has been constantly scrutinized in previous research, and the possible reduction of acquiescence response bias when including negatively worded items is generally not worth the cost of lower psychometric quality and scale validity when compared to positively worded items (Roszkowski & Soven, 2010; Schrieheim & Hill, 1981). The lack of any negatively worded items in the final contributive justice scale does not appear to be a major issue based on these findings, as well as the fact that the Colquitt (2001) organizational justice dimensions also do not have any negatively worded items.

Continuing the discussion about the results of the EFA, not all the positively worded items that did have adequate item-total correlations (>.40) were included in the final measure. First, one item (item 9) did not have the minimum factor loading of .32 to be retained for the measure. This item was a part of the task quality subdimension of complex labor, and the item text was “Do you engage in work tasks that are skilled and interesting more frequently than you

engage in work tasks that are boring and menial?". These results indicate that the frequency of which one engages in complex tasks in comparison to routine tasks is not a part of the contributive justice construct and measure. This is because contributive justice is not determined by if one engages in complex tasks MORE than routine labor tasks, rather it is determined by if one has the equal opportunity as others in similar job positions to engage in complex tasks to some degree. Individuals in some lower-level job positions are likely to engage in routine tasks more frequently than complex tasks, and this cannot be inverted quickly or easily. These individuals can still experience contributive justice if they are provided with the opportunity to engage in complex tasks to some extent, based on their capabilities. These individuals would also experience contributive justice if they were provided with the opportunity to train and develop their capabilities for complex tasks, in addition to receiving support from the organization regarding complex tasks. It is both unrealistic and unpractical for contributive justice to demand that all individuals engage in complex tasks more frequently than routine tasks, which is why this item did not load significantly with the items from the other complex labor dimensions (opportunity, training, and support), which better represent contributive justice.

Overall, the results of the EFA for complex labor indicated that the subdimensions of opportunity, training, and support best compose the final complex labor dimension. However, as mentioned earlier with item 8, this does not mean that the sharing of routine/menial tasks is not an important aspect of complex labor and contributive justice more broadly. Rather, it indicates that this item (item 8) may need to be adjusted to match the language of the other complex labor items. Additional items could also be generated to capture this aspect, such as items referencing whether there is role/task rotation in the organization to allow individuals to engage in complex tasks.

Moving forward to the results of the participation items, 5 of the 9 participation items from the original EFA were dropped from the final measure due to having a significant factor loading (above .32) in more than a single factor. These items were items 18, 19, 22, 24, and 25. These items were a part of the information (18 and 19), consideration (22), and support (24 and 25) subdimensions of participation. What these results suggest is that these items are a poorer representation of the participation dimension compared to the 3 opportunity items (14, 15, and 16), and the single consideration item (21). There are a few potential reasons for this finding. The first is that the content of these items is too similar to the content of certain complex labor items (the training and support items). This can be seen in the similar language between many of the items (e.g., "support", "guidance", "encourage"). Second, the significant cross-loadings indicate that these items do not clearly measure a single factor. The issue with items that have significant cross-loadings is that in multiple samples, one sample might interpret the item as representing one factor while a different sample might interpret the item as representing another factor. This, therefore, limits the generalizability of the measure across different samples. These results suggest that it may be better to have a more concise interpretation of the participation dimension of contributive justice by including only the opportunity and consideration subdimensions while excluding the information and support subdimensions.

While there are an unequal number of items between the two dimensions (7 for complex labor and 4 for participation), the reliability analysis and correlation results do not indicate that this is an issue. The participation dimension still has a good Cronbach's alpha of .88 and is significantly correlated with other variables. Additionally, there is an unequal number of items in the Colquitt (2001) measure of the organizational justice dimension, with procedural justice having 7 items compared to interpersonal and distributive justice's 4 items each, and

informational justice's 5 items. These results suggest that the domain of complex labor may be larger than the domain of participation for contributive justice.

Moving to the results of the CFA, modifications were necessary to improve the model fit, which involved correlating the error terms of multiple item pairings. Whether or not the correlated error terms were simply a function of the sample or the items themselves remains to be seen, and further testing of the model fit of the contributive justice measure is needed. The fit indices also suggested that improvements to the model could be made, as the RMSEA value was above the recommended .06 cut-off. One potential reason for this finding is that since the RMSEA fit index is based on the chi-square value, it means that larger sample sizes will increase the RMSEA value as the chi-square value also increases with larger sample sizes. While the value of the RMSEA value for the CFA model is of some concern, numerous researchers have cautioned against using any single cut-off value to determine model fit due to cut-off values potentially having arbitrariness, limited generalizability, and overall appropriateness concerns (Barrett, 2007; Chen et al., 2008; Marsh, Hau, & Wen, 2004; Steiger, 2000). Therefore, it is recommended to take a more holistic approach to determine model adequacy, by evaluating multiple model fit indices as well as empirical adequacy (Bagozzi & Yi, 2012; Markland, 2007). Using this approach, the results suggested that the contributive justice measure is an adequately fitting model, although the fit is not excellent.

Discussion

The main purpose of this study was to establish a reliable and valid measure of contributive justice that is reflective of the conceptualization of contributive justice presented in this thesis. To ensure that the measure was reliable and valid, EFAs, CFAs, and reliability analyses were conducted to capture the factor structure, dimensionality, and fit statistics of the contributive justice measure. Following the establishment of a reliable contributive justice measure, which included 7 complex labor items and 4 participation items, construct-related validity was tested by ensuring that the contributive justice measure is discriminable and distinct from organizational justice dimensions, meaningful work, and instrumental voice. Criterion-related validity was tested by correlating contributive justice with the other variables in the study, such as non-instrumental voice, empowerment, inclusion, work alienation, self-esteem, and psychological well-being, which were all significantly correlated in the expected direction. Other non-hypothesized statistical analyses were conducted such as the incremental validity (through hierarchical multiple regressions) of contributive justice compared to the other organizational justice dimensions. Contributive justice was found to have incremental validity over these dimensions for meaningful work, instrumental voice, and inclusion. Lastly, the mean scores of the contributive justice measure and its dimensions were compared across different demographic groups in a series of ANOVAs. Results suggested that there were differences in perceptions of contributive justice for race and sex, but only for the participation dimension. There were also differences for the total contributive justice measure across job position and income level, but not educational attainment or job industry.

Theoretical Implications

The result of the study contributes to organizational justice research in multiple ways. First, it helps to situate contributive justice in an organizational context, while previously it was considered in more of a societal context (Gomberg, 2007). Next, clarity was provided on the contributive justice construct by consolidating and synthesizing previous research (Sayer, 2009; Timmermann, 2018). In doing so, the contributive justice construct was found to be comprised of two dimensions, the equal opportunity to engage in complex labor and the equal opportunity to participate in decision-making processes. A clear definition of what is meant by "opportunity" was also provided (following the framework of Ford et al., 1992), which was not clearly outlined in previous research. In addition to the two dimensions of contributive justice, subdimensions were also established to enhance the breadth and depth of the contributive justice construct. These subdimensions included training and support for complex labor and consideration for participation. These subdimensions are important in understanding that simply providing the equal opportunity to contribute complex labor and participate in decision-making processes is not adequate on its own, as the breadth/depth of these opportunities are important for both dimensions while training and support are needed for complex labor opportunities and fair consideration of input is needed when participating in decision-making processes.

Next, it helped establish the fact that contributive justice is a distinct and separate construct from the other Colquitt (2001) organizational justice dimensions through tests of discriminant validity. Therefore, instead of subsuming the contributive justice items under existing organizational justice dimensions, it is better to consider contributive justice as its own construct and measure it as so. This illustrates that the element of fairness that was previously

missing in organizational justice research (the equality of opportunities to contribute) is indeed a separate construct that was not already being measured by the other justice dimensions.

In general, when examining the correlations between contributive justice, the other organizational justice dimensions, and the other variables, contributive justice had stronger correlations to the other variables compared to the other justice dimensions. Tests of incremental validity were conducted with three dependent variables: meaningful work, instrumental voice, and inclusion, and the result of these tests suggested that contributive justice explained additional variance over all four justice dimensions when they were included in a model together. In other words, the equal opportunity to contribute complex labor and participate in decision-making processes predicted meaningful work, instrumental voice, and inclusion beyond the other justice dimensions that were not capturing this element of fairness, further speaking to the necessity of the contributive justice measure. Therefore, organizations that want to improve their employee's perceptions of meaningful work, instrumental voice, and inclusion may want to focus on providing contributive justice.

These findings as well as the criterion-related validity findings suggest how contributive justice may be expanding the overall scope of organizational justice as a construct. Although organizational justice is considered to broadly be about fairness in the workplace, the existing organizational justice dimensions focus primarily on fairness related to outcomes and outcome allocation processes. While providing equal opportunities to contribute in the organization through contributive justice will affect employee outcomes, it will also affect the overall employee experience in the workplace. These equal opportunities to contribute can help employees have a greater positive experience in the workplace, in the form of working on complex tasks that utilize their skills and abilities, as well as being a participative member of

their workgroup and providing input on decisions that can have even further impact on their workplace experiences. Contributive justice is therefore focused on examining the fairness in what one has the opportunity to do at work on a regular basis (as part of the overall work experience) and argues that this focus should be present in organizational justice as a whole while it is currently being neglected. It is evident that this element of fairness provided through contributive justice is important for a number of variables reflecting workplace experiences including meaningful work, instrumental voice, inclusion, and empowerment, variables that are not often examined with other organizational justice dimensions.

Contributive justice also challenges the notion that differences in outcomes are solely based on differences in contributions. In recognizing that opportunities to contribute are not always equal, contributive justice is addressing an inequality that is not often discussed or referenced in the majority of organizational justice research. The reasoning behind why these inequalities exist is likely due to a number of different factors, such as the historical division of labor between complex and routine (often affecting those of lower socioeconomic status), as well as certain group differences such as race, gender, and job position level. The results of the study suggest that these inequalities are not mitigated simply by work experience, tenure, or education level. Instead, organizational policies and resources are arguably the only effective way to mitigate inequalities in opportunities to contribute. Contributive justice challenges whether there can truly be fairness in the organization if these policies/resources are available but are not being implemented and used by the organization.

While the importance of contributive justice has been illustrated, this does not mean that organizations should discount the other organizational justice dimensions when attempting to improve fairness. Contributive justice should not exist independently of the other organizational

justice dimensions, and vice versa. In order to fully experience fairness in the workplace, an employee must have the equal opportunity to contribute through engaging in complex labor and participation in decision-making processes. However, it is also necessary that when employees receive outcomes from the organization, these outcomes should be reflective of what they contributed given their opportunities. The procedures used to determine these outcomes should also be fair and free from bias, while the leaders who enacted these procedures should be respectful and provide adequate information regarding the procedures. The inclusion of both contributive justice and the other organizational justice dimensions more fully encapsulates fairness in the workplace compared to either alone.

Focusing outside of the organizational justice dimensions, the result of the study clearly suggested that contributive justice is distinct from but positively related to both meaningful work and instrumental voice. As previously discussed, the equal opportunity to contribute complex labor and participate in decision-making processes may relate to perceptions of meaningful work and instrumental voice, particularly among individuals from lower socioeconomic backgrounds that previously did not have these opportunities. Those who have the opportunity to contribute complex labor have the opportunity to utilize their skills and abilities at work, thus increasing the likelihood that they perceive their work to be meaningful. The opportunity to participate in decisions will also increase the likelihood that one perceives their work as meaningful since they can influence decisions, feel closer to coworkers, and are more involved in the work processes. The distinction between instrumental voice and non-instrumental voice is also important and the result of the study confirmed the hypothesis that contributive justice is more related to instrumental voice than non-instrumental voice. Non-instrumental voice does not concern itself with the quality/impact of one's participation, but rather that one simply had the opportunity to

participate at all. Meanwhile, instrumental voice is concerned with the quality of one's participation, which is more in line with contributive justice's focus on not only ensuring that employees have the equal opportunity to participate, but also that when they do participate, they have their input fairly listened to and considered by others.

The study also further established the nomological network of contributive justice beyond the organizational justice dimensions, meaningful work, and voice. Contributive justice and its dimensions were significantly positively related to empowerment, inclusion, self-esteem, and psychological well-being, while they were significantly negatively related to work alienation. These results suggest that contributive justice, in providing the equal opportunity to contribute complex labor and participate in decision-making processes, is likely to shape the perceptions of an employee regarding their work and the organization as a whole. The positive relationship with empowerment suggests employees feel they can shape their work roles through increased autonomy and competence, and that they have increased influence and impact in their workgroup when experiencing contributive justice. Second, the increased opportunities for contributions facilitated through contributive justice are naturally going to be related to increased perceptions of inclusion, which is a function of an employee's ability to fully and meaningfully contribute to a workgroup (Mor Barak & Cherin, 1998). Employees from lower socioeconomic backgrounds or lower-level job positions who struggle to feel included in the workplace are likely to benefit from the opportunities provided by contributive justice because these opportunities are equal and available to all employees. Therefore, contributive justice can help employees to perceive that they belong and are valued in a workgroup due to their increased perceptions of inclusion.

When individuals receive the equal opportunity to engage in complex labor and participate in decision-making, they are also LESS likely to perceive their work to be

unfulfilling, unrewarding, and meaningless, which are the elements of work alienation (Mottaz, 1981). Contributive justice can help to reduce feelings of work alienation by providing employees with the opportunity to do more fulfilling work tasks involving complex skills and abilities and help employees feel more involved and less disconnected from their work through opportunities to participate in decision-making processes. Moreover, the findings also suggest that contributive justice has implications for employees outside of the workplace, in that it is related to self-esteem and psychological well-being. Contributive justice can allow an individual to experience self-esteem and psychological well-being because the equal opportunity to engage in complex labor allows individuals to develop and utilize their skills and abilities at work, providing them with a sense of mastery, completion, and competence. Likewise, the equal opportunity to participate in decision-making processes allows individuals to voice their opinions and be heard by others in their workplace, which can lead to them feeling more respected and valued by their coworkers. When combined, the equal opportunity to engage in complex labor and participate in decision-making processes in the workplace can ultimately lead to feelings of self-respect and increasing feelings of self-worth. These results indicate that contributive justice may have a positive spill-over effect from one's experiences at work to their life in general, much like how job satisfaction can have a spill-over effect into life satisfaction (Judge & Watanabe, 1993).

The contributive justice measure was also compared across different demographic groups in the sample. One of the key driving forces behind the conceptualization of contributive justice is that it is intended to signify and eventually address the inequalities experienced by specific groups (Gomberg, 2007). Female and non-White participants perceived lower participation opportunities than male and White participants, respectively. These results show the potential

injustice that minorities and women experience in the workplace as they are not receiving the same opportunities as others in similar positions to participate in decision-making processes, which is in line with previous research regarding participative decision-making (Markey et al., 2002). Despite there being no significant difference in the mean for complex labor and the total scale, this finding still points to the fact that women and minority employees are being treated differently than their majority counterparts, limiting their potential for instrumental voice and making contributions to the organization.

Other demographic variables were evaluated as well, such as work experience, age, job position, and income level. Notably, greater work experience and age did NOT lead to greater contributive justice perceptions, indicating that tenure and seniority were not related to being provided complex labor and participation opportunities. This helps dispel the notion that individuals will eventually be provided/rewarded with complex labor and participation opportunities if they stay at an organization for a long period of time and "pay their dues". Meanwhile, individuals with greater levels of income reported greater contributive justice perceptions, as it is likely that roles that have opportunities to engage in complex labor and participate in decisions pay better than roles that do not. However, the most significant demographic difference was for participant job position/level, notably between the administration/support staff position and the trained professional and technician positions for both contributive justice dimensions and the total scale.

What this suggests is that individuals who are in administration/support staff positions, which can be considered lower-level positions, are less likely to have the equal opportunity to engage in complex labor and participate in decision-making processes as others in the same/similar job position compared to those in higher-level job positions such as trained

professionals and technicians. Further analyses revealed that there were also significant differences between the administration/support staff position and the trained professional position for other variables in the study. Notably, the administration/support staff position had lower distributive justice, procedural justice, meaningful work, instrumental voice, empowerment, inclusion, and self-esteem while having higher work alienation compared to the trained professional position. These results suggest that one's job position/level can greatly impact work-related and nonwork-related variables and outcomes (including contributive justice), most likely due to differences in status/resources between job levels.

Two demographic variables had no significant differences between groups for the contributive justice dimensions or total scale, those being education level and job industry. Beginning first with education level, this result was somewhat surprising considering that one's education level is thought to be a determining factor for one's level of complex skills and abilities, which suggests that those with a higher education level should have higher complex labor opportunities. However, one's level of complex skills and abilities does not automatically mean that one will be provided with the *opportunity* to engage in work tasks that utilize them. Similarly, one's education level does not mean that one will have the *opportunity* to participate in decision-making processes. These findings corroborate the report by Morrison (2019) that college graduates in the UK still struggle to find complex and meaningful work despite their education level. In the present sample, an individual with a 4-year college degree did not differ significantly in their opportunities for complex labor and participation compared to an individual who was a high school graduate and did not go to college. Contributive justice, therefore, is not guaranteed to be experienced simply by having a college degree.

Lastly, there were no differences in either the contributive justice dimensions or total scale between groups for job industry. This is also a somewhat surprising finding in that one's job industry would likely play a role in determining one's ability to engage in complex labor and participate in decision-making. However, the issue with the job industry measure used in the study was that it did not specify what type of company the employees worked for, but rather just the overall broader industry. For example, just in the management, business, science, and arts occupations job industry alone, there can be a multitude of different types of companies, all with different organizational hierarchies and degrees to which complex labor is utilized and participation in decision-making is available. Moving forward, a more specific measurement of job industry/organization type would be needed to evaluate the job industry and organizational context factors that impact the degree of contributive justice one experiences.

Another element of contributive justice that has not yet been discussed is the element of time. This is an important element to address because it is crucial for contributive justice to be present and take place over time in an organization in order for employees to receive the full benefits of being provided with opportunities to contribute. This is to say that it is not satisfactory for opportunities to contribute complex labor or participate in decision-making processes to only happen a few times and then later be dropped or cut back significantly. It is also unlikely that individuals would perceive meaningful work, instrumental voice, and inclusion after only a few instances of receiving opportunities to contribute, since their overall work experience has not changed greatly. Rather, when employees receive regular opportunities to contribute in the organization over months/years, they are more likely to change their perceptions of meaningful work, instrumental voice, and inclusion because their workplace experiences have also changed significantly. Regular opportunities to contribute to core work processes over time

would also make it more likely that perceptions of self-esteem and psychological well-being outside of work will increase compared to single instances of opportunities happening sporadically.

Therefore, it is important for organizations to realize that implementing contributive justice policies and providing equal opportunities for employees to contribute will not result in employees changing their perceptions instantly. While most employees are likely to view the contributive justice policies positively when they are first introduced, the policies and resources continued usage over time in the organization is what will lead to greater changes in perceptions of workplace experiences among employees. Employees are unlikely to react positively if these opportunities to contribute dwindle over time or disappear altogether and may view the organization as disingenuous and uncommitted in their attempt to create more equality and fairness in their organization. Leaders, supervisors, and the organization as a whole therefore need to be committed to providing contributive justice over time as a long-term organizational goal.

Overall, this study helped to contribute to the organizational justice and fairness field by establishing the reliability and validity of the contributive justice measure, establishing the nomological network of contributive justice, as well as evaluating the differences in perceptions of contributive justice between different demographic groups. As a result, future research related to organizational justice and employee well-being can be conducted in a variety of employee samples and organizational contexts to capture important elements of organizational fairness that were not captured before. We can next evaluate the practical implications of the present study's findings, as well as discuss the limitations of the present study and the possible future directions of contributive justice research.

Practical Implications

The result of the study suggests the importance of contributive justice and as such, many organizations and managers may be concerned with increasing contributive justice in their workplace to increase perceptions of fairness and to allow employees to make greater contributions in work processes. Therefore, there must be evaluations of how organizations can practically provide equal opportunities to engage in complex labor and participate in decision-making processes. First, for complex labor opportunities, managers can work with their subordinates to establish the baseline level of each employee's job-related skills/abilities. Next, managers should evaluate whether there are specific tasks in each employee's job position that allows them to utilize these complex skills/abilities. If there are specific tasks, managers need to determine the frequency and availability of these tasks, to distribute them evenly among employees possessing the necessary skills/abilities who would be interested in engaging in those tasks. If employees in a specific job position do not have the necessary skills/abilities to engage in a complex task, then managers should evaluate the best training/development opportunities available instead to allow the employee to develop those skills/abilities to eventually engage in the complex task. Training and development opportunities should also be provided to all employees regardless of their current level of skill/ability to prepare them for the future, whether the future involves changing job positions or engaging in tasks in their current position that involves greater complexity.

Another mechanism that would allow all employees to engage in complex tasks would be the sharing of complex/routine labor among employees. Sayer (2009) suggested that complex labor can be shared on a rotational basis, whether it is hourly, daily, or weekly, and that the goal of a rotational system is not to make all employees have equal amounts of complex labor and

routine labor but instead to ensure that all employees will be given the opportunity to engage in complex labor to some degree. One example of this could be employees getting the opportunity once a week to engage in a task their supervisor typically does, such as creating a presentation or analyzing data. If it is possible, it would likely be beneficial for the supervisor to assist their employee with the complex task and for them to work on the task together. However, this may not always be possible, and therefore the routine labor normally done by the employee may need to be done by the supervisor or another individual while the employee engages in the complex task (i.e., task rotation). Despite the employee not engaging in that complex task every day, they are still getting the opportunity to utilize their skills/abilities and contribute to a greater extent than without this opportunity. The rotation of tasks/roles among workers has been suggested to increase worker motivation as well as shared mental models between team members and is thought to be generally feasible (Harrison & Humphrey, 2010).

As for the equal opportunity to participate in decision-making processes, there is less concern regarding the scarcity of opportunities as there is with complex labor. In fact, various participative programs have been previously used by organizations, including consultative management, quality circles, suggestion systems, and employee acceptance, to name a few (Davis & Newstrom, 1997; Irawanto, 2015). Contributive justice is less concerned with the specific program in which participating in decision-making occurs, but rather that employees have the equal opportunity to participate and that these opportunities involve both breadth (the employee being able to discuss pros/cons of a decision, impact of the decision on workers, alternative decisions) and depth (length of discussion) of an employee's participation, and that supervisors/others fairly consider and listen to every employee's input. The organization should also instruct and train leaders to facilitate the discussion to ensure that all employees have their

input fairly considered and listened to when they participate. This can be accomplished through a checklist/rubric that the leader can document and reference when employees provide their input.

As for both complex labor and participation, organizations should make a concerted effort to provide support regarding these opportunities to individuals from traditionally marginalized groups and those in lower-level job positions. Low levels of empowerment, self-efficacy, and psychological safety may discourage individuals from these groups from engaging in complex labor or participating in decision-making processes even when they are provided the opportunity to do so. Organizations should strive to ease these concerns by ensuring fair treatment to all employees regarding these opportunities and communicate that these opportunities are for employees to help develop their skills/abilities and provide their input in a safe and constructive manner. Organizations should also communicate that there will be no negative consequences regarding these opportunities (for example, organizations should emphasize that an employee who performs poorly when engaging in a complex task or when providing input in a decision will not face any disciplinary actions). Providing the combination of the opportunities themselves along with organizational support should help individuals from these groups contribute to a greater degree and perceive greater organizational fairness.

Limitations and Future Directions

The present research, as with all research, has limitations. First, the contributive justice measure was evaluated using a single sample, while it is typically recommended that new measures have confirmatory factor analysis conducted in a separate sample than the exploratory factor analysis sample, as is the last step in the Hinkin (1998) measurement development process. This, combined with the model modifications that were necessary for the present study's CFA may limit the overall generalizability of the measure, in terms of factor structure and model

fit. Additionally, the measures were all self-report measures, which could contribute to issues relating to common method variance and potentially biased or inaccurate responses from participants.

Third, the study utilized a cross-sectional correlational design, which does not allow for causality to be proven between any of the variables. Therefore, the results of the study are unable to prove whether it is contributive justice that leads to greater meaningful work, instrumental voice, inclusion, and self-esteem (as the contributive justice theory would suggest) or if, in the opposite direction, that these variables lead to greater perceptions of contributive justice. As mentioned in the theoretical implications, contributive justice is not expected to increase perceptions of meaningful work and related variables instantaneously, and the amount of time needed for contributive justice to affect other variables remains unknown. Measuring contributive justice and the other variables at a single time point limits our knowledge of the true impact of contributive justice on these other variables. While our results suggest that contributive justice is related to these other variables (and strongly related in some cases), the nature of these relationships with respect to time remains unclear.

Another limitation is that tests of discriminant validity were only conducted with the Colquitt (2001) organizational justice dimensions, which is not the only measure of organizational justice in the literature. There may be other organizational justice measures that are similar to this study's measure of contributive justice, and therefore additional tests of discriminant validity would need to be conducted. Similarly, incremental validity was only conducted with the organizational justice measures and not other variables in the study. Lastly, many of the original items generated were not included in the final contributive justice measure. Most notably, there were no negatively coded items, no items from the task quality subdimension

for complex labor, and no items from the information or support subdimensions for participation. As stated in the results, this suggests that the measure of contributive justice may not be finalized as additional task quality items can be generated to cover that aspect of complex labor that was theorized to be important for contributive justice.

There are multiple directions that future research on contributive justice can move toward. First, research can continue to evaluate the psychometric properties of the contributive justice measure, by evaluating the factor structure, discriminant validity, and incremental validity of the measure in different samples. This research can include revised items for the contributive justice measure (such as the suggested revised items in this thesis), alternative measures of organizational justice, and other variables that may be related to meaningful work, instrumental voice, and inclusion. Doing so would help strengthen the reliability and validity of the contributive justice measure. Second, future research can focus on expanding the nomological network of contributive justice. There are many other variables that contributive justice is likely to have relationships with, including job-related attitudes such as job satisfaction, work engagement, affective commitment/retention, psychological safety, job involvement, and overall fairness perceptions. The relationships between contributive justice and job-related behaviors can also be examined, such as organizational citizenship behaviors and counterproductive work behaviors. There are also nonjob-related variables to evaluate with contributive justice, including self-efficacy, physiological health, community participation, and locus of control. Investigating the relationship between contributive justice and these nonjob-related variables is important because contributive justice as a form of fairness is thought to influence employees' quality of work life, which should translate into quality of life outside of work as well. The opportunities

provided, or not provided due to a lack of contributive justice may have lasting implications on job and nonjob-related variables, but the nature of these implications is still unclear.

Third, future research can evaluate the specific components of one's work context that are most likely to influence contributive justice perceptions. As stated in the discussion, there were no differences in the mean of the contributive justice measure across job industries, as the industries were likely too broadly defined to capture potential differences. A more specific measurement of job industry would likely be useful in determining differences between industries. It could also be beneficial to acquire more information about an individual's job position, rather than a broad category such as administration/support staff. This information could include the employee's job tasks/major job responsibilities, whether there are opportunities for advancement, and the degree of control they are provided. Another important contextual component to evaluate is organizational culture and leadership style. It is likely that organizational culture (focus on hierarchy, power differentials between employees, whether the organization values employee learning and development, etc.) will influence the degree to which one is provided with the opportunities discussed in contributive justice. Likewise, leadership style may also determine the extent to which opportunities for complex labor and participation are facilitated and supported by leaders.

Fourth, future research should continue to investigate the demographic differences in contributive justice perceptions. Contributive justice, as a form of organizational fairness, was developed in part to address the inequalities faced by many individuals in marginalized groups. These inequalities stem from the degree to which one is able to contribute in the organization, which is determined by their opportunities to contribute complex labor and participate in decision-making processes. Future research can investigate whether the results of the present

study, that women and minorities do not have equal opportunities to participate in decision-making processes despite having equal opportunities to contribute complex labor, are found in other samples or not.

Additionally, future research can also take a longitudinal approach to investigate how contributive justice impacts other variables. For example, a study can evaluate employee perceptions (meaningful work, voice, inclusion, self-esteem, etc.) before and after complex labor and participation opportunities are provided in an organization through programs/policies being newly implemented. Ideally, this study would collect information from participants at multiple time points, to track the impact of contributive justice over time. This design would therefore alleviate the cross-sectional limitation of not being able to prove the causal direction between contributive justice and other variables. Receiving information at multiple time points would also show how much time is required for the opportunities provided through contributive justice to impact employee perceptions of meaningful work, inclusion, and other variables. A longitudinal study would be among the most important future directions for contributive justice in terms of validating the theoretical relationships between it and other variables.

Conclusion

Contributive justice addresses an element of justice/fairness that existing organizational justice dimensions fail to address, that being the equality of opportunity. The existing organizational justice dimensions focus more on equity as the basis of fairness (individuals who contribute more receive more rewards) while neglecting the fact the ability of an individual to contribute is dependent on several factors, including receiving opportunities to contribute, socioeconomic status, and demographic group membership. The contributive justice construct instead recognizes this fact and is focused on including the equality of opportunity as a basis of fairness in organizations. Increasing the ability of employees to contribute in the organization is enacted through providing all employees with the equal opportunity to learn and develop complex skills/abilities to engage in more complex and meaningful work tasks, in addition to the equal opportunity to participate in decision-making processes and participate in an impactful manner.

By doing so, organizations can help to alleviate roadblocks in the ability of employees to make contributions, helping to address existing demographic differences. In expanding the definition of what is considered fair in organizations, contributive justice helps to enhance employees' experiences in the workplace, such as perceived meaningful work, instrumental voice, empowerment, and inclusion. These experiences can help employees to feel less work alienation while in turn experiencing greater self-esteem and psychological well-being outside of the workplace. Overall, research should continue to evaluate and measure contributive justice in a wide array of contexts, as it is an important aspect of organizational fairness that has been neglected, despite its importance for employee well-being and its potential to help all groups make contributions in the workplace.

REFERENCES

Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology* (pp. 267-299). New York: Academic Press.

Allan, B. A., Batz-Barbarich, C., Sterling, H. M., & Tay, L. (2019). Outcomes of meaningful work: A meta-analysis. *Journal of Management Studies, 56*(3), 500-528.

Allan, B. A., Dexter, C., Kinsey, R., & Parker, S. (2018). Meaningful work and mental health: Job satisfaction as a moderator. *Journal of Mental Health, 27*(1), 38-44.

Arnold, K. A., Turner, N., Barling, J., Kelloway, E. K., & McKee, M. C. (2007). Transformational leadership and psychological well-being: the mediating role of meaningful work. *Journal of Occupational Health Psychology*, *12*(3), 193-203.

Autin, K. L., & Allan, B. A. (2020). Socioeconomic privilege and meaningful work: A psychology of working perspective. *Journal of Career Assessment*, 28: 241–256.

Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191-215.

Bagozzi, R. P., & Yi, Y. (2012). Specification, evaluation, and interpretation of structural equation models. *Journal of the Academy of Marketing Science, 40*(1), 8-34.

Barrett, P. (2007). Structural equation modelling: Adjudging model fit. *Personality and Individual Differences*, *42*(5), 815-824.

Barnette, J. J. (2000). Effects of stem and Likert response option reversals on survey internal consistency: If you feel the need, there is a better alternative to using those negatively worded stems. *Educational and Psychological Measurement*, *60*(3), 361-370.

Bauer, T. N., Truxillo, D. M., Sanchez, R. J., Craig, J. M., Ferrara, P., & Campion, M. A. (2001). Applicant reactions to selection: Development of the selection procedural justice scale (SPJS). *Personnel Psychology*, *54*(2), 387-419.

Baumeister, R. F., Campbell, J. D., Krueger, J. I., & Vohs, K. D. (2003). Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles?. *Psychological Science in the Public Interest*, *4*(1), 1-44.

Blauner, R. (1964). *Alienation and freedom: The factory worker and his industry.* Chicago U. Press.

Brown, T. A. (2015). *Confirmatory factor analysis for applied research* (2nd ed. ed.). New York, NY: The Guilford Press.

Browne, M. W., & Cudeck, R. (1992). Alternative ways of assessing model fit. *Sociological Methods & Research*, *21*(2), 230-258.

Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, *56*(2), 81-105.

Cattell, R. B. (1966). The scree test for the number of factors. *Multivariate Behavioral Research*, 1, 245-276.

Chalofsky, N. (2003). An emerging construct for meaningful work. *Human Resource Development International*, *6*(1), 69-83.

Chen, F., Curran, P. J., Bollen, K. A., Kirby, J., & Paxton, P. (2008). An empirical evaluation of the use of fixed cutoff points in RMSEA test statistic in structural equation models. *Sociological Methods & Research*, *36*(4), 462-494.

Chung, B. G., Ehrhart, K. H., Shore, L. M., Randel, A. E., Dean, M. A., & Kedharnath, U. (2020). Work group inclusion: Test of a scale and model. *Group & Organization Management*, *45*(1), 75-102.

Chyung, S. Y., Barkin, J. R., & Shamsy, J. A. (2018). Evidence-based survey design: The use of negatively worded items in surveys. *Performance Improvement*, *57*(3), 16-25.

Cohen-Charash, Y., & Spector, P. E. (2001). The role of justice in organizations: A meta-analysis. *Organizational Behavior and Human Decision Processes*, *86*(2), 278-321.

Colquitt, J. A. (2001). On the dimensionality of organizational justice: A construct validation of a measure. *Journal of Applied Psychology, 86*: 386–400.

Colquitt, J. A., Conlon, D. E., Wesson, M. J., Porter, C. O., & Ng, K. Y. (2001). Justice at the millennium: a meta-analytic review of 25 years of organizational justice research. *Journal of Applied Psychology*, *86*(3), 425-445.

Dalal, D. K., & Carter, N. T. (2015). Consequences of ignoring ideal point items for applied decisions and criterion-related validity estimates. *Journal of Business and Psychology*, *30*(3), 483-498.

Daston, L. (2008). Life, chance & life chances. *Daedalus*, *137*(1), 5-14.

Davis, L. L. (1992). Instrument review: Getting the most from a panel of experts. *Applied Nursing Research*, *5*(4), 194-197.

Davis, K., & Newstrom, J. W. (1997). *Human Behaviour at Work: Organizational behavior*. New York: McGraw-Hill Companies.

Dewettinck, K., Singh, J., & Buyens, D. (2003). Psychological empowerment in the workplace: Reviewing the empowerment effects on critical work outcomes. *Vlerick Business School*.

Diener, E., Wirtz, D., Biswas-Diener, R., Tov, W., Kim-Prieto, C., Choi, D. W., & Oishi, S. (2009). New measures of well-being. In *Assessing well-being* (pp. 247-266). Springer, Dordrecht.

Evans, G. (2006) *Educational Failure and Working Class White Children in Britain*. Palgrave, Basingstoke.

Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological methods*, *4*(3), 272-299.

Feinstein, L. (2003). Inequality in the early cognitive development of British children in the 1970 cohort. *Economica*, *70*(277), 73-97.

Ford, J. K., MacCallum, R. C., & Tait, M. (1986). The application of exploratory factor analysis in applied psychology: A critical review and analysis. *Personnel Psychology*, 59, 291-314.

Ford, J. K., Quiñones, M. A., Sego, D. J., & Sorra, J. S. (1992). Factors affecting the opportunity to perform trained tasks on the job. *Personnel Psychology*, *45*(3), 511-527.

Gallie, D., Felstead, A., & Green, F. (2012). Job preferences and the intrinsic quality of work: the changing attitudes of British employees 1992–2006. *Work, Employment and Society*, *26*(5), 806-821.

George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference. 11.0 update* (4th ed.). Boston: Allyn & Bacon.

Gist, M. E., & Mitchell, T. R. (1992). Self-efficacy: A theoretical analysis of its determinants and malleability. *Academy of Management Review*, *17*(2), 183-211.

Gomberg, P. (2007). *How to make opportunity equal*. New York: Wiley Blackwell.

Greenberg, J. (1987). A taxonomy of organizational justice theories. *The Academy of Management Review*, *12*(1), 9-22.

Greenberg, J. (1990). Organizational justice: Yesterday, today, and tomorrow. *Journal of Management*, *16*(2), 399-432.

Guadagnoli, E., & Velicer, W. F. (1988). Relation of sample size to the stability of component patterns. *Psychological Bulletin*, 103, 265-275.

Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. *Organizational Behavior and Human Performance*, *16*(2), 250-279.

Hair, J.F., Black, W.C., Babin, B.J. & Anderson, R.E. (2010) *Multivariate Data Analysis*, 7th ed., Prentice Hall, Upper Saddle River, NJ.

Han, T. S., Chiang, H. H., & Chang, A. (2014). Employee participation in decision making, psychological ownership and knowledge sharing: mediating role of organizational commitment in Taiwanese high-tech organizations. In *Confucian HRM in Greater China* (pp. 174-189). Routledge.

Harrison, D. A., & Humphrey, S. E. (2010). Designing for diversity or diversity for design? Tasks, interdependence, and within-unit differences at work. *Journal of Organizational Behavior, 31*(2/3), 328-337.

Harvey, R. J., Billings, R. S., & Nilan, K. J. (1985). Confirmatory factor analysis of the Job Diagnostic Survey: Good news and bad news. *Journal of Applied Psychology, 70*(3), 461–468.

Hewitt, J. P. (2009). *Oxford Handbook of Positive Psychology*. Oxford University Press, 217–224.

Hinkin, T. R. (1998). A brief tutorial on the development of measures for use in survey questionnaires. *Organizational Research Methods, 1*(1), 104-121.

Hoelter, J. W. (1983). The analysis of covariance structures: Goodness-of-fit indices. *Sociological Methods and Research,* 11, 325-344.

Homans, G. C. (1961). *Social behavior and its elementary forms*. New York: Harcourt, Brace and World.

Hope Pelled, L., Ledford, Jr, G. E., & Albers Mohrman, S. (1999). Demographic dissimilarity and workplace inclusion. *Journal of Management Studies, 36*(7), 1013-1031.

Howell, T. M., Harrison, D. A., Burris, E. R., & Detert, J. R. (2015). Who gets credit for input? Demographic and structural status cues in voice recognition. *Journal of Applied Psychology, 100*(6), 1765-1784.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1-55.

Huczynski, A. A., & Lewis, J. W. (1980). An empirical study into the learning transfer process in management training. *Journal of Management Studies, 17*(2), 227-240.

Irawanto, D. W. (2015). Employee participation in decision making: Evidence from state owned enterprise in Indonesia. *Management: Journal of Contemporary Management Issues, 20*(1), 159-172.

Judge, T. A., & Kammeyer-Mueller, J. D. (2012). Job attitudes. *Annual Review of Psychology, 63,* 341-367.

Judge, T. A., & Watanabe, S. (1993). Another look at the job satisfaction-life satisfaction relationship. *Journal of Applied Psychology, 78*(6), 939–948.

Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal, 33*(4), 692-724.

Kamdron, T. (2005). Work motivation and job satisfaction of Estonian higher officials. *International Journal of Public Administration, 28*(13-14), 1211-1240.

Kim, J., & Mueller, C. W. (1978). *Introduction to factor analysis: What it is and how to do it*. Beverly Hills, CA: Sage.

Kim, Y. J., Van Dyne, L., Kamdar, D., & Johnson, R. E. (2013). Why and when do motives matter? An integrative model of motives, role cognitions, and social support as predictors of OCB. *Organizational Behavior and Human Decision Processes, 121*(2), 231-245.

Kline, R. (2011). Convergence of structural equation modeling and multilevel modeling. In *The SAGE handbook of innovation in social research methods* (pp. 562-589). SAGE Publications Ltd.

Konovsky, M. A. (2000). Understanding procedural justice and its impact on business organizations. *Journal of Management, 26*(3), 489-511.

Korsgaard, M. A., & Roberson, L. (1995). Procedural justice in performance evaluation: The role of instrumental and non-instrumental voice in performance appraisal discussions. *Journal of Management, 21*(4), 657-669.

Lane, R. E. (1991). *The market experience*. Cambridge: Cambridge University Press.

Lareau, A. (2003) *Unequal Childhoods: Class, Race and Family Life*, University of California Press, Berkeley, CA.

Lee, K. E., Kim, J. H., & Kim, M. J. (2016). Influence of perceived organizational justice on empowerment, organizational commitment and turnover intention in the hospital nurses. *Indian Journal of Science and Technology, 9*(20), 1-8.

Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology*.

Markey, R., Hodgkinson, A., & Kowalczyk, J. (2002). Gender, part-time employment and employee participation in australian workplaces. *Employee Relations, 24*(2), 129-150.

Markland, D. (2007). The golden rule is that there are no golden rules: A commentary on Paul Barrett's recommendations for reporting model fit in structural equation modelling. *Personality and Individual Differences, 42*(5), 851-858.

Marsh, H. W., Hau, K. T., & Wen, Z. (2004). In search of golden rules: Comment on hypothesis-testing approaches to setting cutoff values for fit indexes and dangers in overgeneralizing Hu and Bentler's (1999) findings. *Structural Equation Modeling, 11*(3), 320-341.

Marx, R. D. (1982). Relapse prevention for managerial training: A model for maintenance of behavior change. *Academy of Management Review, 7*(3), 433-441.

Maslow, A. H. (1987). *Motivation and Personality* (Third ed.). New York: Harper & Row.

Masterson, S. S., Lewis, K., Goldman, B. M., & Taylor, M. S. (2000). Integrating justice and social exchange: The differing effects of fair procedures and treatment on work relationships. *Academy of Management Journal*, *43*(4), 738-748.

May, D. R., Gilson, R. L., & Harter, L. M. (2004). The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of Occupational and Organizational Psychology*, *77*(1), 11-37.

May, D. R., Li, C., Mencl, J., & Huang, C.-C. (2014). The ethics of meaningful work: Types and magnitude of job-related harm and the ethical decision-making process. *Journal of Business Ethics*, *121*(4), 651–669.

McDonald, R. P. (1985). *Factor Analysis and Related Methods*. Hillsdale, NJ: Erlbaum.

Mills, M., McGregor, G., Baroutsis, A., Te Riele, K., & Hayes, D. (2016). Alternative education and social justice: Considering issues of affective and contributive justice. *Critical Studies in Education*, *57*(1), 100-115.

Mor Barak, M. E., & Cherin, D. A. (1998). A tool to expand organizational understanding of workforce diversity: Exploring a measure of inclusion-exclusion. *Administration in Social Work*, 22: 47-64.

Morrison, A. (2019). Contributive justice: Social class and graduate employment in the UK. *Journal of Education and Work*, *32*(4), 335-346.

Morrison, E. W., & Milliken, F. J. (2000). Organizational silence: A barrier to change and development in a pluralistic world. *Academy of Management Review*, 25: 706–725.

Mottaz, C. J. (1981). Some determinants of work alienation. *Sociological Quarterly*, *22*(4), 515-529.

Mowbray, P. K., Wilkinson, A., & Tse, H. H. (2015). An integrative review of employee voice: Identifying a common conceptualization and research agenda. *International Journal of Management Reviews*, *17*(3), 382-400.

Murphy, J. B. (1993). *The moral economy of labor: Aristotelian themes in economic theory*. Yale Univ. Press.

Muthén, L. K., & Muthén, B. O. (2002). How to use a Monte Carlo study to decide on sample size and determine power. *Structural Equation Modeling*, *9*(4), 599-620.

Nair, N., & Vohra, N. (2009). Developing a new measure of work alienation. *Journal of Workplace Rights*, *14*(3), 293-309.

Najafi, S., Noruzy, A., Azar, H. K., Nazari-Shirkouhi, S., & Dalv, M. R. (2011). Investigating the relationship between organizational justice, psychological empowerment, job satisfaction, organizational commitment and organizational citizenship behavior: An empirical model. *African Journal of Business Management*, *5*(13), 5241-5248.

Naumann, S. E., & Bennett, N. (2000). A case for procedural justice climate: Development and test of a multilevel model. *Academy of Management Journal*, *43*(5), 881-889.

Ng, T. W., & Feldman, D. C. (2012). Employee voice behavior: A meta-analytic test of the conservation of resources framework. *Journal of Organizational Behavior*, *33*(2), 216-234.

Parker, S. K. (1998). Enhancing role breadth self-efficacy: the roles of job enrichment and other organizational interventions. *Journal of Applied Psychology*, *83*(6), 835-852.

Polit, D. F., & Beck, C. T. (2006). The content validity index: are you sure you know what's being reported? Critique and recommendations. *Research in Nursing & Health*, *29*(5), 489-497.

Price, J. L., & Mueller, C. W. (1986). *Handbook of organizational measurement*. Marshfield, MA: Pitman.

Rawls, J. (1971). *A theory of justice*. Oxford University Press.

Rawls, J. (1999). *A theory of justice: Revised edition*. Harvard University Press.

Roberson, Q., & Scott, W. (2022). Contributive Justice: An Invisible Barrier to Workplace Inclusion. *Journal of Management*, 0(0). https://doi.org/10.1177/01492063221116089

Robins, R. W., Hendin, H. M., & Trzesniewski, K. H. (2001). Measuring global self-esteem: Construct validation of a single-item measure and the Rosenberg Self-Esteem Scale. *Personality and Social Psychology Bulletin*, *27*(2), 151-161.

Rosenberg, M. (1979). *Conceiving the Self*. New York: Basic Books.

Roszkowski, M. J., & Soven, M. (2010). Shifting gears: Consequences of including two negatively worded items in the middle of a positively worded questionnaire. *Assessment & Evaluation in Higher Education*, *35*(1), 113-130.

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, *57*(6), 1069-1081.

Sayer, A. (2009). Contributive justice and meaningful work. *Res publica*, *15*(1), 1-16.

Sayer, A. (2011). Habitus, work and contributive justice. *Sociology*, 45: 7-21.

Sayer, A. (2012). Capabilities, contributive injustice and unequal divisions of labour. *Journal of Human Development and Capabilities*, *13*(4), 580-596.

Schmitt, N. W., & Stults, D. M. (1985). Factors defined by negatively keyed items: The results of careless respondents? *Applied Psychological Measurement*, 9, 367-373.

Schriesheim, C. A., & Hill, K. D. (1981). Controlling acquiescence response bias by item reversals: The effect on questionnaire validity. *Educational and Psychological Measurement, 41*(4), 1101-1114.

Schriesheim, C. A., Powers, K. J., Scandura, T. A., Gardiner, C. C., & Lankau, M. J. (1993). Improving construct measurement in management research: Comments and a quantitative approach for assessing the theoretical content adequacy of paper-and-pencil survey-type instruments. *Journal of Management, 79*, 385-417.

Schwab, D. P. (1980). Construct validity in organization behavior. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior* (Vol. 2, pp. 3-43). Greenwich, CT: JAI.

Schweiger, G. (2013). Recognition and social exclusion. A recognition-theoretical exploration of poverty in Europe. *Ethical Perspectives*, *20*(4), 529–554.

Seeman, M. (1975). Alienation studies. *Annual Review of Sociology*, 91-123.

Shapiro, D. L. (1993). Reconciling theoretical differences among procedural justice researchers by re-evaluating what it means to have one's views "considered": Implications for third-party managers. In R. Cropanzano (Ed.), *Justice in the workplace: Approaching fairness in human resource management* (pp. 51–78). Lawrence Erlbaum Associates, Inc.

Scott-Ladd, B., & Marshall, V. (2004). Participation in decision making: A matter of context? *Leadership & Organization Development Journal, 25*(8), 646-662.

Shiffrin, S. V. (2003). Race, labor, and the fair equality of opportunity principle. *Fordham Law Review*, 72, 1643–1675.

Shore, L. M., Randel, A. E., Chung, B. G., Dean, M. A., Holcombe Ehrhart, K., & Singh, G. (2011). Inclusion and diversity in workgroups: A review and model for future research. *Journal of Management*, 37: 1262-1289.

Smith, A. (2010). *The Wealth of Nations: An inquiry into the nature and causes of the Wealth of Nations*. Harriman House Limited.

Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal*, *38*(5), 1442-1465.

Stamper, C., L., & Masterson, S. S. (2002). Insider or outsider? How employee perceptions of insider status affect their work behavior. *Journal of Organizational Behavior*, 23: 875-894.

Steger, M. F., Dik, B. J., & Duffy, R. D. (2012). Measuring meaningful work: The work and meaning inventory (WAMI). *Journal of Career Assessment*, *20*(3), 322-337.

Steiger, J. H. (2000). Point estimation, hypothesis testing, and interval estimation using the RMSEA: Some comments and a reply to Hayduk and Glaser. *Structural Equation Modeling, 7*(2), 149-162.

Stillman, T. F., & Baumeister, R. F. (2009). Uncertainty, belongingness, and four needs for meaning. *Psychological Inquiry*, *20*(4), 249-251.

Taka, I., & Foglia, W. D. (1994). Ethical aspects of ‘‘Japanese leadership style’’. *Journal of Business Ethics, 13*(2), 135–148.

Thibaut, J. W., & Walker, L. (1975). *Procedural justice: A psychological analysis*. L. Erlbaum Associates.

Timmermann, C. (2018). Contributive justice: An exploration of a wider provision of meaningful work. *Social Justice Research*, 31: 85-111.

Timmermann, C., & Félix, G. F. (2015). Agroecology as a vehicle for contributive justice. *Agriculture and Human Values*, *32*(3), 523-538.

Van Dyne, L., Ang, S., & Botero, I. C. (2003). Conceptualizing employee silence and employee voice as multidimensional constructs. *Journal of Management Studies, 40*(6), 1359-1392.

Van Dyne, L., & LePine, J. A. (1998). Helping and voice extra-role behaviors: Evidence of construct and predictive validity. *Academy of Management Journal*, *41*(1), 108-119.

Veltman, A. (2016). *Meaningful work*. New York: Oxford University Press.

Walkerdine, V., & Lucey, H. (1989) *Democracy in the Kitchen*, Virago, London.

Walumbwa, F. O., & Schaubroeck, J. (2009). Leader personality traits and employee voice behavior: mediating roles of ethical leadership and work group psychological safety. *Journal of Applied Psychology*, *94*(5), 1275-1286.

Worthington, R. L., & Whittaker, T. A. (2006). Scale development research: A content analysis and recommendations for best practices. *The Counseling Psychologist*, *34*(6), 806-838.

Yeoman, R. (2014). Conceptualising meaningful work as a fundamental human need. *Journal of Business Ethics*, *125*(2), 235-251.

Zeigler-Hill, V., Holden, C. J., Enjaian, B., Southard, A. C., Besser, A., Li, H., & Zhang, Q. (2015). Self-esteem instability and personality: The connections between feelings of self-worth and the big five dimensions of personality. *Personality and Social Psychology Bulletin*, *41*(2), 183-198.

APPENDIX A: Tables

Table 1: Complex Labor as a Part of the Contributive Justice Measure

Elements of the Complex Labor Dimension of Contributive Justice

- Employees should receive the equal opportunity to contribute complex labor.
- These opportunities should involve both the breadth (variety) of work tasks, and the depth (frequency) of work tasks employees are able to engage in.
- Employees should receive equal opportunities for the training and development of complex skills and abilities.
- Routine labor should be shared and there should be less engagement of routine labor compared to complex labor
- Employee perceptions that others in the organization help support their opportunities to contribute complex labor through mentoring, encouragement, and guidance

Table 2: Participation in Decision-Making Processes as Part of the Contributive Justice Measure

Elements of the Participation Dimension of Contributive Justice

- Employees should receive the equal opportunity to participate in decision-making processes.
- These opportunities should encompass both the breadth and depth of participating in decision-making processes.
- Employees should receive equal access to information relevant to the decision.
- Employees should perceive that others are listening to and are fairly considering their inputs when participating.
- Employees should perceive that others in the organization provide support, encouragement, and guidance when they participate.

Table 3: Proposed Relationships Between Contributive Justice and Other Variables

Variable	Contributive Justice
Organizational Justice Dimensions	
Distributive Justice	+
Procedural Justice	+
Interpersonal Justice	+
Informational Justice	+
Job-Related Variables	
Meaningful work	+
Employee Voice (Instrumental)	+
Employee Voice (Non-Instrumental)[1]	+
Empowerment	+
Inclusion	+
Work Alienation	-
NonJob-Related Variables	
Psychological well-being	+
Self-esteem	+

Note.

+ Indicates that there will be a statistically significant positive relationship between the variable and contributive justice.

- Indicates that there will be a statistically significant negative relationship between the variable and contributive justice.

[1] Indicates that non-instrumental employee voice will have a weaker relationship with contributive justice compared to instrumental employee voice.

Table 4: The Initial Items of the Contributive Justice Measure

#	Item	Dim.	Sub.
1	Does your organization ensure that you have the same opportunities as others to engage in work tasks that utilize complex skills and abilities?	CL	Opp.
2	Do you have the opportunity to engage in a variety of work tasks that utilize complex skills and abilities to the same degree as others?	CL	Opp.
3	Do you have the opportunity to frequently engage in work tasks that utilize complex skills and abilities to the same degree as others?	CL	Opp.
4	Do others have more opportunities to use complex skills and abilities in work tasks compared to yourself? (Reverse coded)	CL	Opp.
5	Does your organization provide you with the same opportunities as others to improve your skills and abilities through training or development programs?	CL	TR
6	Does your organization provide you with adequate resources to help develop and improve work-related skills and abilities?	CL	TR
7	Do others receive more training and development opportunities compared to yourself? (Reverse coded)	CL	TR
8	Are boring and menial work tasks shared among employees?	CL	TQ
9	Do you engage in work tasks that are skilled and interesting more frequently than you engage in work tasks that are boring and menial?	CL	TQ
10	Do your work tasks primarily consist of boring and menial work, with little opportunity for challenging or skilled work? (Reverse coded)	CL	TQ
11	Do employees in your organization support and encourage each other to develop and utilize their skills and abilities in their work tasks?	CL	Sup.
12	Do more experienced employees in your organization help provide mentoring and guidance when you are engaging in a work task that requires complex skills and abilities?	CL	Sup.
13	Do you have difficulty receiving support and guidance from others in your organization when engaging in a complex work task? (Reverse Coded)	CL	Sup.
14	Do you have the same opportunities as others to participate in decision-making processes?	P	Opp.
15	Do you have the opportunity to discuss a variety of topics (e.g., pros/cons of a decision, impact of the decision on workers, alternative decisions) to the same degree as others when participating in decision-making processes?	P	Opp.
16	Do you have the opportunity to discuss topics in depth to the same degree as others when participating in decision-making processes?	P	Opp.

Table 4 (cont'd)

#	Item	Dim.	Sub.
17	Do others have greater opportunities to participate in decision-making processes compared to yourself? (Reverse coded)	P	Opp.
18	Does your organization ensure that every employee has the necessary information to participate and provide input in decision-making processes?	P	Inf.
19	Does your organization adequately provide you with all the necessary information such that you can participate in decision-making processes to the same degree as others?	P	Inf.
20	Are others who are participating in decision-making processes provided with more relevant information compared to yourself? (Reverse coded)	P	Inf.
21	Do your supervisors and peers listen to and consider what you have to say when you provide your input in decision-making processes?	P	Con.
22	Do your supervisors and peers provide you with feedback and suggestions for improvement regarding your participation in decision-making processes?	P	Con.
23	Do your supervisors and peers not discuss your ideas in detail and provide feedback when you are participating in decision-making? (Reverse coded)	P	Con.
24	Do others provide you with support and encouragement to participate in decision-making processes?	P	Sup.
25	Does your organization ensure that employees are equally provided with guidance and support regarding participation in decision-making processes?	P	Sup.
26	Is there is a lack of support from others in the organization when you try to participate in decision-making processes? (Reverse coded).	P	Sup.

Note. Dim = Dimension. Sub. = Subdimension. CL = Complex Labor. P = Participation. Opp. = Opportunity. TR = Training. TQ = Task Quality. Sup. = Support. Inf. = Information. Con. = Consideration.

Table 5*:* Models for the Examination of Discriminant Validity

Model	# of factors
B1. Contributive Justice (Complex Labor and Participation), Distributive Justice, Procedural Justice, Interpersonal Justice, Informational Justice	6
Complex Labor loading onto Distributive Justice	5
Complex Labor loading onto Procedural Justice	5
Complex Labor loading onto Interpersonal Justice	5
Complex Labor loading onto Informational Justice.	5
Participation loading onto Distributive Justice	5
Participation loading onto Procedural Justice	5
Participation loading onto Interpersonal Justice	5
Participation loading onto Informational Justice	5
Total Contributive Justice loading onto Distributive Justice	4
Total Contributive Justice loading onto Procedural Justice	4
Total Contributive Justice loading onto Interpersonal Justice	4
Total Contributive Justice loading onto Informational Justice	4
B2. Complex Labor, Participation, Meaningful work	3
Complex Labor loading onto Meaningful Work	2
Participation loading onto Meaningful Work	2
Total Contributive Justice loading onto Meaningful Work	1
B3. Complex Labor, Participation, Voice	3
Complex Labor loading onto Voice	2
Participation loading onto Voice	2
Total Contributive Justice loading onto Voice	1

Note. Only two models will be compared at a time, with the baseline model (B1, B2, B3) being compared to a model that has the same variables but has a fewer number of factors.

Table 6: Demographic Variables of the Sample (N= 534)

Sex		
	Male	51%
	Female	49%
Race		
	White	57%
	Black	19%
	Hispanic	11%
	Asian	8%
Age		
	20-29 years old	49%
	30-39 years old	33%
	40+ years old	18%
Education		
	High school	16%
	Some college, no degree	20%
	2-year college degree	8%
	4-year college degree	55%
Work Experience		
	1-5 years	38%
	5-10 years	25%
	10-20 years	23%
	20+ years	12%
Income		
	$0 to $30,000	49%
	$30,000 to $60,000	33%
	$60,000 or greater	15%
Occupational Category		
	Management, Business, Science, Arts	30%
	Service	19%
	Sales/Office	13%
	Production, Transportation, Material Moving	11%
	Education	10%
	Natural Resources, Construction, Maintenance	6%
	Healthcare	6%
	Government/Civil	5%
Job Position/Level		
	Administration/Support Staff	35%
	Trained Professional	33%
	Technician	13%
	Consultant	6%
	Management	6%
	Sales	5%
	Teacher	2%

Table 7: Initial EFA with 17 Contributive Justice Items

Item #	Item	Factor 1	Factor 2	Factor 3	Com.
1	Does your organization ensure that you have the same opportunities as others to engage in work tasks that utilize complex skills and abilities?	.05	.20	**.63**	.63
2	Do you have the opportunity to engage in a variety of work tasks that utilize complex skills and abilities to the same degree as others?	.13	.02	**.80**	.79
3	Do you have the opportunity to frequently engage in work tasks that utilize complex skills and abilities to the same degree as others?	.07	.05	**.82**	.81
5	Does your organization provide you with the same opportunities as others to improve your skills and abilities through training or development programs?	-.23	**.77**	.22	.58
6	Does your organization provide you with adequate resources to help develop and improve work-related skills and abilities?	-.19	**.82**	.15	.64
9	Do you engage in work tasks that are skilled and interesting more frequently than you engage in work tasks that are boring and menial?	.23	.08	.30	.28
11	Do employees in your organization support and encourage each other to develop and utilize their skills and abilities in their work tasks?	.03	**.55**	.16	.46
12	Do more experienced employees in your organization help provide mentoring and guidance when you are engaging in a work task that requires complex skills and abilities?	.10	**.54**	.04	.41
14	Do you have the same opportunities as others to participate in decision-making processes?	**.66**	.03	.12	.58
15	Do you have the opportunity to discuss a variety of topics (e.g., pros/cons of a decision, impact of the decision on workers, alternative decisions) to the same degree as others when participating in decision-making processes?	**.90**	-.16	.16	.78

Table 7 (cont'd)

Item #	Item	1	2	3	Com.
16	Do you have the opportunity to discuss topics in depth (length of discussion) to the same degree as others when participating in decision-making processes?	**.93**	-.16	.10	.78
18	Does your organization ensure that every employee has the necessary information to participate and provide input in decision-making processes?	**.37**	**.53**	-.05	.64
19	Does your organization adequately provide you with the necessary information such that you can participate in decision-making processes to the same degree as others?	**.51**	**.40**	-.03	.66
21	Do your supervisors and peers listen to and consider what you have to say when you provide your input in decision-making processes?	**.53**	.24	.01	.52
22	Do your supervisors and peers provide you with feedback and suggestions for improvement regarding your participation in decision-making processes?	**.34**	**.54**	-.12	.55
24	Do others provide you with support and encouragement to participate in decision-making processes?	**.46**	**.44**	-.06	.63
25	Does your organization ensure that employees are equally provided with guidance and support regarding participation in decision-making processes?	**.35**	**.64**	-.13	.71

Note. Factor loadings of >.32 have been bolded. Com. = Communalities.

Table 8: Contributive Justice Items, Factor Loadings, and Communalities Obtained with the Pattern Matrix of the Two-Factor Solution

Item #	Item	Factor 1	Factor 2	Com.
1	Does your organization ensure that you have the same opportunities as others to engage in work tasks that utilize complex skills and abilities?	**.64**	.16	.58
2	Do you have the opportunity to engage in a variety of work tasks that utilize complex skills and abilities to the same degree as others?	**.58**	.25	.60
3	Do you have the opportunity to frequently engage in work tasks that utilize complex skills and abilities to the same degree as others?	**.62**	.21	.61
5	Does your organization provide you with the same opportunities as others to improve your skills and abilities through training or development programs?	**.86**	-.15	.58
6	Does your organization provide you with adequate resources to help develop and improve work-related skills and abilities?	**.82**	-.09	.58
11	Do employees in your organization support and encourage each other to develop and utilize their skills and abilities in their work tasks?	**.61**	.08	.44

Table 8 (cont'd)

Item #	Item	Factor 1	Factor 2	Com.
12	Do more experienced employees in your organization help provide mentoring and guidance when you are engaging in a work task that requires complex skills and abilities?	**.51**	.13	.37
14	Do you have the same opportunities as others to participate in decision-making processes?	.13	**.66**	.56
15	Do you have the opportunity to discuss a variety of topics (e.g., pros/cons of a decision, impact of the decision on workers, alternative decisions) to the same degree as others when participating in decision-making processes?	-.06	**.97**	.85
16	Do you have the opportunity to discuss topics in depth (length of discussion) to the same degree as others when participating in decision-making processes?	-.09	**.96**	.81
21	Do your supervisors and peers listen to and consider what you have to say when you provide your input in decision-making processes?	.23	**.49**	.45

Note. Com. = Communalities Factor loadings of >.32 have been bolded. Factor 1 and Factor 2 correlated at .68.

Table 9: Standardized Factor Loadings of the Two-Factor CFA Model

Item #	Complex Labor	Participation
1	0.820	
2	0.811	
3	0.813	
5	0.628	
6	0.633	
11	0.614	
12	0.543	
14		0.790
15		0.859
16		0.827
21		0.688

Table 10: Two-Factor CFA vs. Single-Factor CFA Comparison

Model	χ^2	df	$\Delta\chi^2$ (Δdf)	CFI	TLI	RMSEA	SRMR
Two Factor model[a]	134.98	39	-	.975	.964	.068	.045
Single Factor Contributive Justice	278.37	40	143.39(1)	.937	.913	.106	.056

Note. a: Factors: Complex Labor and Participation. $\Delta\chi^2$ value >3.84 is significant at $p < .01$.

Table 11: CFA Model Comparisons- Organizational Justice

Model	χ^2	df	$\Delta\chi^2$ (Δdf)	CFI	TLI	RMSEA	SRMR
Six Factor model[a]	1145.80	415	-	.943	.937	.057	.052
Complex Labor loading onto Distributive Justice	1952.09	420	806.29(5)	.882	.869	.083	.115
Complex Labor loading onto Procedural Justice	1679.82	420	534.02(5)	.903	.892	.075	.069
Complex Labor loading onto Interpersonal Justice	1937.15	420	791.35(5)	.883	.870	.082	.111
Complex Labor loading onto Informational Justice.	1787.54	420	641.74(5)	.894	.883	.078	.083
Participation loading onto Distributive Justice	1855.28	420	709.48(5)	.889	.877	.080	.109
Participation loading onto Procedural Justice	1566.18	420	420.38(5)	.911	.902	.072	.069
Participation loading onto Interpersonal Justice	1824.84	420	679.04(5)	.891	.880	.080	.105
Participation loading onto Informational Justice	1700.49	420	554.69(5)	.901	.890	.076	.081
Total Contributive Justice loading onto Distributive justice	2428.90	424	1283.10(9)	.845	.830	.094	.113
Total Contributive Justice loading onto Procedural justice	1896.92	424	751.12(9)	.886	.875	.081	.071
Total Contributive Justice loading onto Interpersonal Justice	2388.77	424	1242.97(9)	.848	.833	.093	.109
Total Contributive Justice loading onto Informational Justice	2101.20	424	955.40(9)	.870	.858	.086	.080

Note. a: Factors: Complex Labor, Participation, Distributive Justice, Procedural Justice, Interpersonal Justice, Informational Justice. All $\Delta\chi^2$ values >16.92 are significant at $p < .01$.

Table 12: CFA Model Comparisons- Meaningful Work and Instrumental Voice

Model	χ^2	df	$\Delta\chi^2$ (Δdf)	CFI	TLI	RMSEA	SRMR
Three Factor model with Meaningful Work[a]	304.57	112	-	.973	.967	.057	.043
Complex Labor loading onto Meaningful Work	1192.14	114	887.57(2)	.848	.818	.133	.191
Participation loading onto Meaningful Work	1088.55	114	783.98(2)	.862	.836	.127	.178
Total Contributive Justice loading onto Meaningful Work	1706.48	115	1401.91(3)	.775	.734	.161	.206
Three Factor model with Voice[b]	314.08	97	-	.957	.946	.065	.052
Complex Labor loading onto Voice	710.37	99	396.29(2)	.878	.852	.108	.072
Participation loading onto Voice	541.21	99	227.13(2)	.912	.893	.092	.063
Total Contributive Justice loading onto Voice	766.20	100	452.12(3)	.867	.840	.112	.074

Note. a: Model includes Complex Labor, Participation, and Meaningful Work as separate factors. b: Model includes Complex Labor, Participation, and Instrumental Voice as separate factors. All $\Delta\chi^2$ values >7.82 are significant at $p < .01$.

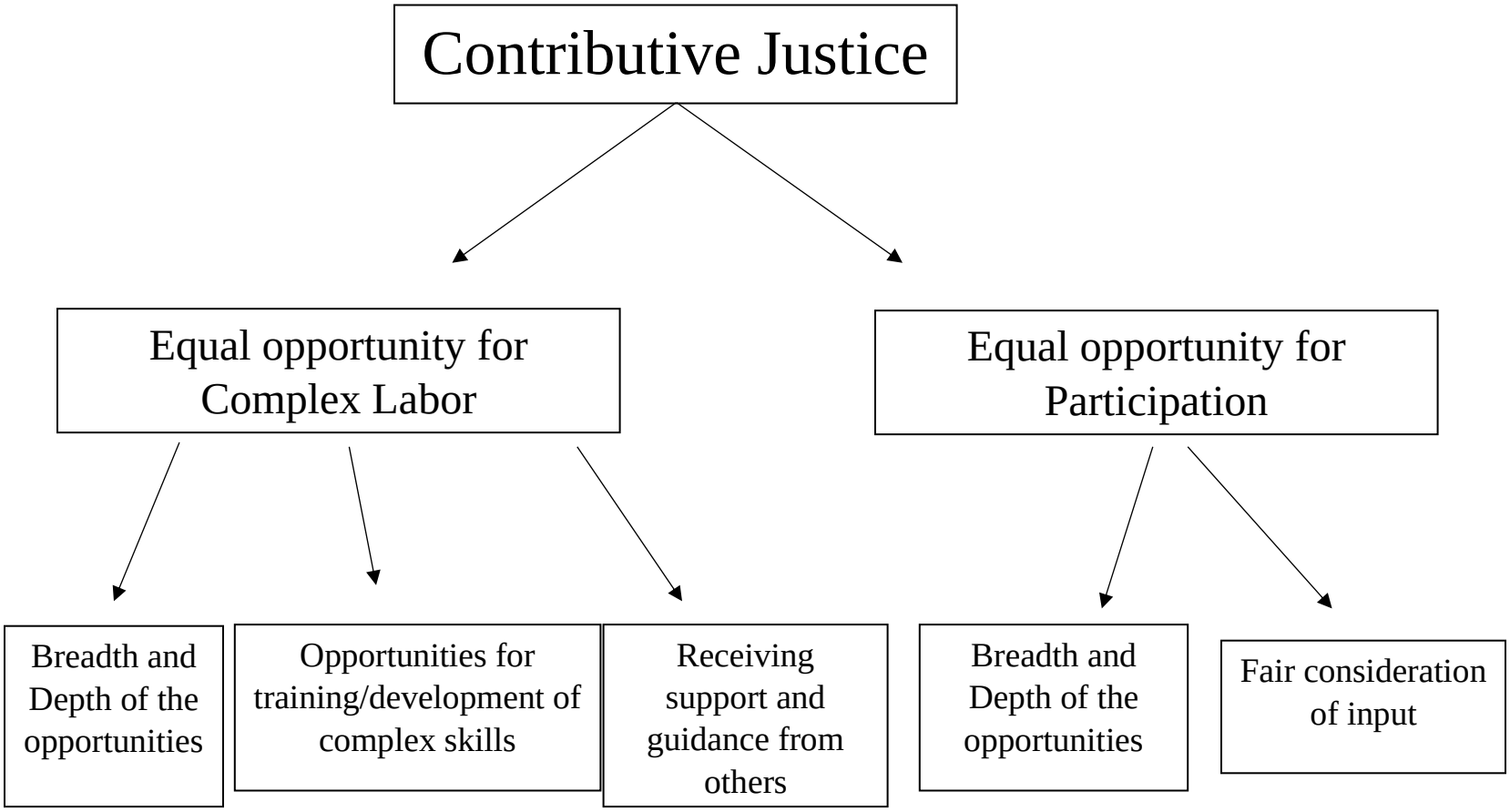
Table 13: Means, Standard Deviations, Correlations, and Internal Consistencies of the Variables

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. DJ	2.60	1.23	(.94)																	
2. PJ	2.70	0.97	.67*	(.88)																
3. INJ	4.03	1.03	.43*	.52*	(.91)															
4. IFJ	3.37	1.12	.55*	.69*	.72*	(.92)														
5. MW	3.74	1.10	.28*	.31*	.30*	.26*	(.95)													
6. IV	3.41	0.90	.38*	.51*	.44*	.49*	.38*	(.81)												
7. NIV	3.21	0.85	.32*	.46*	.33*	.40*	.35*	.56*	(.88)											
8. EMP	5.23	0.95	.24*	.31*	.25*	.26*	.41*	.54*	.49*	(.86)										
9. CO	5.99	0.96	.02†	.07†	.04†	.01†	.25*	.17*	.26*	.60*	(.87)									
10. SED	5.25	1.24	.24*	.28*	.32*	.30*	.31*	.44*	.39*	.83*	.32*	(.84)								
11. IMP	4.45	1.48	.25*	.31*	.19*	.24*	.37*	.57*	.46*	.85*	.25*	.57*	(.91)							
12. INC	3.79	0.80	.31*	.45*	.44*	.43*	.47*	.68*	.50*	.57*	.29*	.44*	.54*	(.92)						
13. WA	2.79	0.93	-.26*	-.34*	-.31*	-.31*	-.81*	-.42*	-.34*	-.40*	-.21*	-.32*	-.36*	-.49*	(.84)					
14. SE	2.94	0.64	.21*	.23*	.17*	.16*	.40*	.37*	.36*	.42*	.42*	.27*	.32*	.45*	-.39*	(.92)				
15. PW	5.35	1.07	.19*	.22*	.17*	.18*	.41*	.35*	.36*	.43*	.41*	.30*	.31*	.46*	-.40*	.81*	(.91)			
16. CL	3.33	0.91	.48*	.53*	.47*	.54*	.44*	.52*	.46*	.36*	.10*	.34*	.34*	.52*	-.47*	.35*	.35*	(.88)		
17. PA	2.92	1.08	.42*	.58*	.42*	.50*	.33*	.63*	.47*	.44*	.14*	.36*	.45*	.57*	-.39*	.36*	.28*	.67*	(.88)	
18. CJ	3.18	0.89	.50*	.59*	.49*	.57*	.43*	.62*	.50*	.43*	.13*	.38*	.42*	.59*	-.48*	.38*	.35*	.95*	.88*	(.91)

Note. M and *SD* are used to represent mean and standard deviation, respectively. * indicates $p < .05$. † indicates $p > .05$. Cronbach's alphas are in parentheses along the diagonal. DJ= Distributive Justice, PJ= Procedural Justice, INJ = Interpersonal Justice, IFJ= Informational Justice, MW = Meaningful Work, IV= Instrumental Voice, NIV = Non-Instrumental Voice, EMP = Empowerment, CO= Competence, SED= Self-Determination, IMP= Impact, INC= Inclusion, WA= Work Alienation, SE= Self-Esteem, PW = Psychological Well-being, CL = Complex Labor, PA= Participation, CJ = Contributive Justice.

APPENDIX B: Figures

Figure 1: Final Dimensionality of the Contributive Justice Measure



APPENDIX C: Full List of Study Measures

Distributive Justice (Colquitt, 2001)
The following questions refer to your organizational outcomes. To what extent:

1. Do your organizational outcomes (pay, rewards, evaluations, promotions, etc.) reflect the effort you have put into your work?
2. Are your organizational outcomes (pay, rewards, evaluations, promotions, etc.) appropriate for the work you have completed?
3. Do your organizational outcomes (pay, rewards, evaluations, promotions, etc.) reflect what you have contributed to the organization?
4. Are your organizational outcomes (pay, rewards, evaluations, promotions, etc.) justified, given your performance?

Procedural Justice (Colquitt, 2001)
The following questions refer to the procedures used to arrive at your organizational outcomes (pay, rewards, evaluations, promotions, etc.). To what extent:

1. Have you been able to express your views and feelings during those procedures?
2. Have you had influence over outcomes arrived at by those procedures?
3. Have those procedures been applied consistently?
4. Have those procedures been free from bias?
5. Have those procedures been based on accurate information?
6. Have you been able to appeal outcomes arrived at by those procedures?
7. Have those procedures uphold ethical and moral standards?

Interpersonal Justice (Colquitt, 2001)
The following questions refer to your authority figure (supervisor, manager) who enacted the procedures used to arrive at your organizational outcomes (pay, rewards, evaluations, promotions, etc.). To what extent:

1. Have they treated you in a polite manner?
2. Have they treated you with dignity?
3. Have they treated you with respect?
4. Have they refrained from making improper remarks or comments?

Informational Justice (Colquitt, 2001)
The following questions refer to your authority figure (supervisor, manager) who enacted the procedures used to arrive at your organizational outcomes (pay, rewards, evaluations, promotions, etc.). To what extent:

1. Have they been candid (honest) in their communications with you?
2. Have they explained the procedures thoroughly?
3. Were their explanations regarding the procedures reasonable?
4. Have they communicated details in a timely manner?
5. Have they seemed to tailor their communications to individuals' specific needs?

Meaningful Work (May, Gilson, Harter, 2004)

1. The work I do on this job is very important to me.
2. My job activities are personally meaningful to me.
3. The work I do on this job is worthwhile.
4. My job activities are significant to me.
5. The work I do on this job is meaningful to me.
6. I feel that the work I do on my job is valuable.

Instrumental Voice (Adapted from Korsgaard & Roberson, 1995)

1. I feel I can introduce new topics during team discussions.
2. I feel that I can influence team discussions.
3. My manager and I share responsibility for the way we do work.
4. I feel that I am unable to influence the direction of team discussions. (reverse-scored)
5. I am able to influence how my work is evaluated to a significant extent.

Non-instrumental Voice (Adapted from Korsgaard & Roberson, 1995)

"To what extent do you …"

1. Make suggestions about how your job might be done differently?
2. Talk about your major job responsibilities?
3. Discuss what you feel your strengths and weaknesses are?
4. Tell your manager about problems you are having on the job?
5. State your side of the story?
6. Express your views about what things are most important in your job?
7. Tell your manager how you would evaluate yourself?
8. Use meetings with your manager as an opportunity to share your ideas and feelings?

Empowerment (Spreitzer, 1995)

Competence

1. I am confident about my ability to do my job.
2. I am self-assured about my capabilities to perform my work activities.
3. I have mastered the skills necessary for my job.

Self-Determination

1. I have significant autonomy in determining how I do my job.
2. I can decide on my own how to go about doing my work.
3. I have considerable opportunity for independence and freedom in how I do my job.

Impact

1. My impact on what happens in my work group is large.
2. I have a great deal of control over what happens in my work group.
3. I have significant influence over what happens in my work group.

Work Group Inclusion (Chung, Ehrhart, Shore, Randel, Dean & Kedharnath, 2020)

1. I am treated as a valued member of my work group.
2. I belong in my work group.
3. I am connected to my work group.
4. I believe that my work group is where I am meant to be.
5. I feel that people really care about me in my work group.
6. I can bring aspects of myself to this work group that others in the group don't have in common with me.
7. People in my work group listen to me even when my views are dissimilar.
8. While at work, I would be comfortable expressing opinions which diverge from my group.
9. I can share a perspective on work issues that is different from my group members.
10. When my group's perspective becomes too narrow, I am able to bring up a new point of view.

Work Alienation (Mottaz, 1981)

1. I do not feel a sense of accomplishment in the type of work I do.
2. My salary is the most rewarding aspect of my job.
3. My work provides me with a sense of personal fulfillment. (R)
4. I have little opportunity to use my real abilities and skills in the type of work I do.
5. My work is a very self-rewarding experience. (R)
6. My work is often routine and dull, providing little opportunity for creativity.
7. My work is interesting and challenging. (R)

Self-Esteem (Rosenberg, 1979)

1. On the whole, I am satisfied with myself.
2. At times I think I am no good at all.
3. I feel that I have a number of good qualities.
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of.
6. I certainly feel useless at times.
7. I feel that I'm a person of worth.
8. I wish I could have more respect for myself.
9. All in all, I am inclined to think that I am a failure.
10. I take a positive attitude toward myself.

Psychological Well-Being (Diener et al., 2009)

1. I lead a purposeful and meaningful life.
2. My social relationships are supportive and rewarding.
3. I am engaged and interested in my daily activities.
4. I actively contribute to the happiness and well-being of others.
5. I am competent and capable in the activities that are important to me.
6. I am a good person and live a good life.
7. I am optimistic about my future.
8. People respect me.

Demographic Questions

Please answer the remaining questions about your background.

1. What sex were you assigned at birth?

   1= Male

   2= Female

   3= Intersex

   4= Prefer not to say

2. What is your age?

   1= 20-29 years old
   2= 30-39 years old
   3= 40-49 years old
   4= 50-59 years old
   5= 60+ years old

3. What is your race/ethnicity?

   1 = White or Caucasian

   2 = Black or African American

   3 = Asian or Asian American

   4 = Hispanic or Latino

   5 = Native American or Alaskan Native

   6= Native Hawaiian or Pacific Islander

   7= Indian or other Southern Asian

   8= Middle Eastern or Arab

   9= Other _____

4. What is your highest level of educational attainment?

   1= Less than High School

   2= High school graduate

   3= Some college, no degree

   4= 2 year college degree

   5= 4 year college degree

   6= Professional degree (Master's)

7= Doctorate

5. How many years of working experience do you have?

   1= 1-3 years
   2= 3-5 years
   3= 6-8 years
   4= 8-10 years
   5= 10-15 years
   6= 15-20 years
   7= 20+ years

6. Please select your job industry/occupation category:

   1= Management, Business, Science, and Arts Occupations
   2= Service Occupations
   3= Sales and Office Occupations
   4= Natural Resources, Construction, and Maintenance Occupations
   5= Production, Transportation, and Material Moving Occupations
   6= Military Specific Occupations
   7= Other, please explain: _____

7. Please select your job position/level:

   1= Management
   2= Trained Professional
   3= Consultant
   4= Technician
   5= Sales
   6= Administration/Support Staff
   7= Other, please explain: _____

8. What is your annual salary before taxes?
   1= less than $10,000
   2= $10,000 to $19,999
   3= $20,000 to $29,999
   4= $30,000 to $39,999
   5= $40,000 to $49,999
   6= $50,000 to $59,999
   7= $60,000 to $69,999
   8= $70,000 to $79,999
   9=$80,000 to $89,999
   10=$90,000 to $99,999
   11= $100,000 to $149,999
   12= More than $150,000

APPENDIX D: Instructions to Administer the Contributive Justice Measure

The following questions refer to your experiences with work tasks and engaging in decision-making processes at your workplace.

Please note that if a question is referring to **"others",** it is referring to **coworkers in your organization who are in a similar job position as yourself.**

Lastly, please note that the response option "To a considerable extent" is greater than a moderate extent but less than a large extent (this will also be true for future questions).
To what extent:

1. Does your organization ensure that you have the same opportunities as others to engage in work tasks that utilize complex skills and abilities?
2. Do you have the opportunity to engage in a variety of work tasks that utilize complex skills and abilities to the same degree as others?
3. Do you have the opportunity to frequently engage in work tasks that utilize complex skills and abilities to the same degree as others?
4. Does your organization provide you with the same opportunities as others to improve your skills and abilities through training or development programs?
5. Does your organization provide you with adequate resources to help develop and improve work-related skills and abilities?
6. Do employees in your organization support and encourage each other to develop and utilize their skills and abilities in their work tasks?
7. Do more experienced employees in your organization help provide mentoring and guidance when you are engaging in a work task that requires complex skills and abilities?
8. Do you have the same opportunities as others to participate in decision-making processes?
9. Do you have the opportunity to discuss a variety of topics (e.g., pros/cons of a decision, impact of the decision on workers, alternative decisions) to the same degree as others when participating in decision-making processes?
10. Do you have the opportunity to discuss topics in depth (length of discussion) to the same degree as others when participating in decision-making processes?
11. Do your supervisors and peers listen to and consider what you have to say when you provide your input in decision-making processes?

Items are measured on a 1 to 5 scale (1: to a small extent, 2: to some extent, 3: to a moderate extent, 4: to a considerable extent, 5: to a large extent.