

Justice Context and Changes in Fairness-Related Criteria Over Time

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Research on distributive, procedural, and interactional justice has shown that individuals have strong preferences for specific fairness-related decision criteria (e.g., equity, etc.) but that the relative importance of these criteria varies as a function of social context. Students offered importance ratings of 21 justice criteria three times over a semester. Multilevel growth curve modeling showed that changes over the semester in factors of distributive justice importance were influenced by fairness perceptions of the instructor and self-interest (i.e., expected grades), but changes in factors of procedural and interactional justice importance were influenced only by fairness perceptions of the instructor. The analyses also supported the presence of procedural and interactional—but not distributive—justice contexts.

According to Tyler and Smith (1998), “one of the most striking findings of social justice research is that people are seldom at a loss when asked whether or not an allocation, a procedure, or a punishment is fair” (p. 602). In study after study, research has demonstrated that people are not only capable and willing to determine fairness, but that they have criteria or standards that allow them to determine those things considered just and unjust.

Various models of justice have offered reasons why justice is important to individuals. For example, Tyler (1994; Tyler & Smith, 1998) has contrasted an instrumental theory of justice—one where self-interest is the primary motive—to a relational model, where justice is important for reasons akin to social standing and group worth. Similarly, integrative frameworks of justice (cf. Brocker & Weisenfeld, 1996; Van den Bos, K., Lind, E. A., Vermunt, R., & Wilke, H. A. M., 1997) have stressed the importance of considering both outcome and procedural information in determining people’s reactions.

Research on distributive, procedural, and interactional justice has shown that individuals have strong preferences for specific fairness-related decision criteria (e.g., neutrality, bias suppression, equity, equality, etc.). This emphasis on the importance of various standards of justice is apparent in Tyler and Smith’s (1998) discussion of objective fairness, Shepelak and Alwin’s (1986) discussion of utopian standards of justice, and finally empirical studies by Barrett-Howard and Tyler (1986) and Wendorf, Firestone, and Alexander (2000). Such a distinction between actual usage and ideological importance is crucial because most justice-related research has emphasized

actual usage of the justice criteria (see Colquitt, Conlon, Wesson, Porter, & Ng, 2000, for a meta-analysis of this type of justice research).

Importantly, the relative importance of these criteria varies as a function of social context (Alexander & Russ, 1985; Barrett-Howard & Tyler, 1986; Wendorf & Alexander, 1999). Furthermore, recent applied research has noted the existence of a procedural justice contextual effect, whereby aggregated justice perceptions exert influence on outcome variables beyond that of individual perceptions (Mossholder, Bennett, & Martin, 1998; Naumann & Bennett, 2000). Such a contextual effect indicates that average group differences in outcome variables are systematically related to specific characteristics of the context within which individuals exist. This emphasis on context is important because it highlights more than just individual perceptions of self-interest and justice but begins to include the context/climate of the social situation (Naumann & Bennett, 2000), thereby extending the integrative frameworks designed to offer explanations of justice.

This has implications for people’s standards of justice. Whereas such a contextual effect has been demonstrated with outcome variables such as satisfaction (Mossholder, Bennett, & Martin, 1998; Wendorf & Alexander, 2000), it remains to be seen if individual perceptions and actual instructor behaviors (i.e., the contextual effect) are capable of biasing individual beliefs about which standards of justice ought to be used in a given situation.

Thus, this study extended earlier research on justice by: 1) studying the nature of people’s judgments of importance for the various justice criteria, 2) examining the impact of procedural, interactional, and distributive context on these judgments, and 3) examining longitudinal changes in the relative importance of the criteria. It is argued here that such an emphasis on longitudinal research promotes a more dynamic conceptualization of the justice and fairness standards that are important in a wide variety of applied settings.

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Method

Participants

Participants for the study were students in psychology classes at a large metropolitan university. In all, 24 psychology classes were surveyed, ranging from several sections of the introductory psychology course to the more advanced undergraduate courses (e.g., psychology of everyday life, developmental psychology, social psychology, statistical methods, perception, abnormal psychology, industrial/organizational psychology). Voluntary testing was done during the class periods for these courses and students were given extra credit at their instructors' discretion for their participation.

The number of students sampled from each class varied between 5 and 254 students ($M = 36.46$, $SD = 52.54$). Approximately 71% of the students were female, while 29% were male. Ages ranged from 17 to 56, with a mean age of 21.75 ($SD = 5.83$). There was considerable ethnic diversity, with 29.9% identifying themselves as African-American, 49.5% as Caucasian-American, 4.7% Asian-American, 4.8% Arab-American, and 2.9% Hispanic-American; the remaining 8.3% either identified with other ethnic groups or did not provide the information.

Overall, a total of 1036 participants were surveyed. However, as is typical for longitudinal research, the number of participants varied from assessment to assessment. Importantly, the third assessment sampled 575 students, where 405 of them were students who participated at all three assessments.

Measurement Instruments

Two primary sets of assessment instruments were used: one to assess the importance students attached to the various justice criteria and one to assess the perceived fairness of the instructor.

Twenty-one distinct justice criteria were assessed. For distributive justice, items representing the importance of equity, equality, ability, status, and need (cf. Adams, 1965; Deutsch, 1975) were included. For procedural justice, items tapping Tyler's (1994) criteria of standing and trust; Leventhal's (1980) criteria of bias suppression, accuracy, neutrality, consistency, correctability, ethicality, and representativeness; and Thibaut and Walker's (1975) criteria of process and decision control were included. Finally, items representing Bies and Moag's (1986) criteria of interactional justice—honesty, courteousness, promptness, and causal accounts—were also included. The importance of the 21 fairness criteria was assessed on a 9-point scale ranging from "not at all important" to "very important." Each criterion was assessed using three items; a student's score for each criterion was the sum of the three items.

Instructor fairness was measured in a similar manner. Students were asked to indicate, on a 9-point scale ranging from "completely disagree" to "completely agree," the extent to which they believed that their instructor: a) used fair procedures (procedural justice), b) interacted fairly with students (interactional justice), and c) handed out fair grades (distributive justice). Each perception of instructor fairness (procedural, interactional, and distributive) was measured using three items. Individual perceptions of instructor fairness were represented as the simple sum of the three items for the appropriate measure. Group-level perceptions of fairness were created by aggregating the individual perceptions; that is, by averaging the individuals' perceptions within each class. Here the aggregated fairness ratings are a proxy measure for the instructors' actual level of fairness.

Finally, all students indicated the grades they expected to receive in the course. Importantly, this measure was scaled such that higher values represent worse grades.

Procedure

Students responded to survey questions three times during a single semester: once within the first week of class, once midway through the semester, and once during the final week of the semester. At each assessment, students responded to the justice items. During the final assessment, students also rated the procedural, interactional, and distributive fairness of their instructor and indicated the grade they expected to receive in the course.

Results

To make the data more amenable to analyses requiring complete data (i.e., SEM) and assuming normality (i.e., SEM and HLM), imputation and transformation procedures were used. For students who completed two of the three items used for any justice criteria or fairness perception, the third (missing) score was replaced by the mean of the other two. All scores (themselves being the sum of three items) were transformed using PRELIS' normal scores, a nonlinear normalizing transformation that has been shown by Jöreskog, Sörbom, du Toit, & du Toit (1999) to optimally reduce the amount of skewness and kurtosis in data.

Longitudinal Factor Analysis

Structural equation modeling via LISREL 8.30 (Jöreskog & Sörbom, 1999) was used to assess the longitudinal factor structure on the pooled within-group covariance matrix of the 21 justice criteria. The use of the pooled within-group matrix follows suggestions by Muthén (1991, 1994), du Toit and du Toit (1999), and du Toit, du Toit, and Cudeck (1999) who have demonstrated the importance of modeling the factor structure independent of any between-group differences or

influences. Thus, for the tests of longitudinal invariance, the number of observations was set to 405 (the number of students who offered complete data) minus 24 (the number of groups). (The reader is encouraged to examine Heck and Thomas, 2000, for an explicit description of this procedure.)

Despite demonstrations by other authors that procedural, interactional and distributive justice criteria form three factors (Moorman, 1991), factor analyses of importance ratings of justice criteria suggests a five-factor solution (Wendorf, Firestone, & Alexander, 2000). A similar five-factor solution was imposed here and shown to have good fit to the data even when specifying the factor loadings and factor covariances invariant over time, $\chi^2(1775, N = 381) = 2877.926$, RMSEA = .040, NNFI = .917, CFI = .925.

In order to promote further analyses, factor scores were created by averaging the justice criteria importance scores corresponding relevant for each factor. The five factors were as follows: 1) Decision-Maker Procedural Fairness (DMPF), which included concerns about trust, ethicality, consistency, neutrality, accuracy, and equal opportunity; 2) Decision-Maker Interactional Justice (DMIF), which included concerns about promptness, honesty, respect, courtesy, and causal accounts; 3) Participation and Appeals Procedures (PAP), which included concerns about decision control, process control, correctability, and representativeness; 4) Specialized Distributive Concerns (SDC), which included concerns about need, status, equality, and ability; and finally 5) Equitable/Normative Concerns (ENC), which included concerns about equity and effort.

Multilevel Growth Curve Modeling

Hierarchical linear modeling (Bryk & Raudenbush, 1992) was used to analyze a multilevel growth model for each of the five factors discussed above. As a first step, an unconditional growth model—one specifying no predictors at any level—was specified for each factor (see Table 1). These models offer important information regarding the nature of change and of the magnitude of change across students and across classes (Bryk & Raudenbush, 1992).

Using a three-level contextual model adapted from HLM specifications used by other authors (Bryk & Raudenbush, 1992; Hofmann & Gavin, 1998), the influence of individual justice perceptions, self-interest (expected grades), and justice context (aggregated justice perceptions) on group and individual-level latent growth curves for each factor was determined (see Table 2).

Averaged across all students, the importance attached to DMPF and DMIF did not change over the semester. However, significant individual variability in change existed and was best predicted by perceptions of instructor fairness but not by self-interest. Justice perceptions at the individual level were a significant predictor of change, such that lower perceptions of fairness were associated

with more negative change parameters (i.e., slopes). This implies that students who believed that their instructor implemented unfair procedures and interacted unfairly were more likely to show a decrease in the rated importance of DMPF and DMIF over the course of the semester.

The importance attached to PAP also decreased over the semester. However, unlike, DMPF and DMIF, PAP ratings were predicted by self-interest and not individual justice perceptions. Students with lower grades were more likely to increase their importance ratings of these procedural, interactional, and participatory elements.

Class-level variability in change for DMPF, DMIF, and PAP was predicted by procedural, interactional, and interactional justice contexts respectively. In each case, classes who had more fair instructors (as perceived by the class as a whole) tended to decrease in the importance attached to these procedural, interactional, and participatory elements.

In contrast, the importance of distributively-oriented criteria did change on average over the semester. For SDC, significant individual variability in change was predicted by both perceptions of instructor fairness and by self-interest; students who had lower grades and who perceived their instructors as less fair tended to increase their importance ratings for concerns about special considerations. For ENC, only individual justice perceptions were significant; students who rated their instructors fairer also tended to highlight the importance of following normative classroom grading (i.e., ENC). Class-level variability in change for both SDC and ENC did not exist and was thus not predicted.

Discussion

Overall, this study demonstrated that justice criteria importance ratings can and do vary over time as a function of instructor behavior, individual perceptions, and vested self-interest. This study therefore provides a complex, multilevel perspective on the standards that people value in deciding what constitutes fairness in a given situation.

First of all, the analyses provide support for the five factor conceptualization of justice originally produced by Wendorf, Firestone, and Alexander (2000). This solution is important because it represents the dimensionality of individual's beliefs about the importance of various justice criteria rather than actual usage. The factor analyses and the multilevel growth models provide crucial evidence for two distinct distributive factors (concerns about normative decision making and concerns about extra-normative or specialized concerns) as well as evidence for a participatory element in procedural justice—a concept as old as research on procedural justice itself (Thibaut & Walker, 1975) but one that is conspicuously absent in much current work.

Table 1
Unconditional Three-Level Growth Models of the Justice Factors

	DMPF		DMIJ		PAPS		ENC		SDC	
	Coeff	t ratio	Coeff	t ratio	Coeff	t ratio	Coeff	t ratio	Coeff	t ratio
Fixed Effects										
Mean Status	26.85	135.10**	27.16	119.64**	18.27	72.10**	23.26	113.49**	7.49	45.94**
Mean Change	-.111	-.86	-.16	-1.81	.14	.97	-.41	-3.44 **	1.02	7.11 **
Random Effects	Var	χ^2	Var	χ^2	Var	χ^2	Var	χ^2	Var	χ^2
Level 1										
Variation	5.86	--	6.32	--	7.31	--	8.46	--	8.50	--
Level 2										
Individual Status	7.67	1236.16*	10.57	1424.68**	13.95	1556.31**	9.99	1178.25**	14.94	1515.00**
Individual Change	.73	645.72**	.60	630.29 **	.80	644.72 **	.66	602.32 **	2.46	798.92 **
Level 3										
Class Status	.23	32.28	.30	35.91 *	.37	34.31	.09	21.93	.01	17.87
Class Change	.16	47.59 *	.01	22.22	.17	40.25 *	.06	26.64	.10	31.18

Note. For the fixed effects and the class mean random effects, $df = 23$. For the individual-level random effects, $df = 512$.

* $p < .05$ ** $p < .001$

Table 2
Three-Level Contextual Growth Models of the Justice Factors

Predictor	DMPF		DMIJ		PAPS		ENC		SDC	
	Coeff	t	Coeff	t	Coeff	t	Coeff	t	Coeff	t
Level 2										
Interest	.05	.70	.02	.13	.29	3.44**	.11	1.00	.33	4.27**
Justice	.11	7.33**	.11	8.73**	-.01	-.58	.06	3.81**	-.09	-4.68**
Level 3										
Context	-.13	-3.64**	-.13	-3.48**	-.10	-2.65*	-.08	-1.33	-.02	.08
Residual										
	Var	χ^2	Var	χ^2	Var	χ^2	Var	χ^2	Var	χ^2
Level 2										
Initial	7.98	1297.01**	10.73	1458.46**	14.28	1637.62**	10.10	1193.07**	14.90	1514.03**
Change	.59	626.54**	.38	596.25**	.76	648.68**	.68	608.11**	2.53	805.70**
Level 3										
Initial	--	--	.20	30.28	--	--	--	--	--	--
Change	.08	38.45*	--	--	.11	35.15*	--	--	--	--

Note. For the fixed effects and the class mean random effects, df = 23. For the individual-level random effects, df = 512.

* p < .05 ** p < .001

Importantly, the factors of justice respond differentially to the influences of individual perceptions of justice and self-interest. Procedural and interactional elements of justice are perpetually important over the semester, and individual concerns about self-interest appear to have little to offer in biasing the importance of these criteria. This finding is consistent with Tyler's (1994) affirmation of justice being less aligned with instrumental concerns than with relational concerns. Likewise, concerns about equity and other normative aspects of distribution are clearly most related to perceptions of justice.

In contrast, concerns about special considerations in distribution and in decision-making are related to self-interest. As the moment of final decision approaches, individuals begin to weigh the importance of their (potentially negative) outcome more strongly (see also Wendorf & Alexander, 2000). This is consistent with Brockner and Weisenfeld's (1986) sense-making analysis of justice concerns which suggests that it is important to take outcomes into consideration, especially in cases where the outcome is perceived to be negative.

Finally, the findings clearly support the presence of procedural and interactional justice contexts, but not a distributive justice context. That is, individual beliefs appear to be biased by a decision-maker's procedural and interactional fairness, but not by his or her distributive fairness. This may, in part, reflect a difficulty in evaluating distributive fairness as compared to procedural fairness, suggesting that people use readily available information to form judgments about fairness (Van den Bos, et al., 1997). This then offers an extension of—and a potential boundary condition for—recent studies in the development of justice context (Mossholder, Bennett, & Martin, 1998; Naumann & Bennett, 2000).

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