

## **The World is More Just for Me than Generally: About the Personal Belief in a Just World Scale's Validity**

**Claudia Dalbert<sup>1</sup>**

---

*Differences between personal and general belief in a just world were studied in four questionnaire studies and one experiment. Personal just world belief could reliably be differentiated from general just world belief, and subjects endorsed more strongly the personal compared to the general just world belief. Moreover, personal belief in a just world predicted subjective well-being and self-esteem, and this positive impact was independent of general just world belief and favorable self-perceptions. Finally, the more subjects were aware of their own unfairness, the more the personal belief in a just world showed a negative impact on self-esteem. Results give evidence to the just world beliefs' character as world views and as indicators of a personal contract between individual and social world.*

---

**KEY WORDS:** just world belief; fairness; self-perception; well-being; self-esteem.

---

People are motivated to believe in a just world where people generally get what they deserve (Lerner, 1965). This belief enables people to confront their physical and social environment as though it were stable and orderly (Lerner and Miller, 1978). Therefore, the belief in a just world serves important adaptive functions and individuals are motivated to protect this belief. The strength of the belief in a just world varies between individuals (Rubin and Peplau, 1973, 1975). It is well documented that a strong belief in a just world fosters the denial of observed injustice in situations with broad social and political unfairness (for a review, Furnham and Procter, 1989). However, when confronted with more specific prosocial situations in which substantial help is possible, belief in a just world and prosocial

<sup>1</sup>Department of Educational Psychology, Martin-Luther-University Halle-Wittenberg, D-06099 Halle (Saale); phone: +49+345-55-23811; fax: +49+345-55-27244 (e-mail: dalbert@paedagogik.uni-halle.de).

commitment are positively related (Bierhoff *et al.*, 1991; Lerner, 1970; Lerner and Simmons, 1966).

Recently, the belief in a just world's positive impact on mental health was investigated in several ways. During one's life course, individuals gather experiences about themselves as well as about the world in which they are living. This knowledge results in personal theories about reality, which serve as individual cognitive filters and influences the preconscious perception, evaluation, and memory of events (Cantor, 1990; Epstein, 1990). Thereby, these cognitive schemata form an important fundament for individual functioning. These schemata rarely comprise exact descriptions of reality, more often they consist of positive illusion, which serve the maintenance of one's mental health (Taylor and Brown, 1988).

One basic schema deals with the construction of a benevolent and meaningful world (Beck *et al.*, 1981; Epstein, 1990). The belief in a just world could be interpreted as an indicator of such a fundamental world theory. The belief in a just world, like other positive illusions, should contribute to the maintenance of one's mental health. Consequently, the relationship between belief in a just world and subjective well-being, as well as self-esteem as important mental health dimensions (Becker, 1986; Dalbert, 1992b), were in the center of studies investigating the belief in a just world's impact on mental health (Bulman and Wortman, 1977; Dalbert, 1996; Lipkus *et al.*, 1996; Kiecolt-Glaser and Williams, 1987; Lerner and Somers, 1992; Libow and Doty, 1979).

There are at least three lines of argumentation in support of the hypothesis that the belief in a just world should have a positive impact on mental health. Firstly, the belief in a just world is seen as a positive illusion that encourages people to see their world as meaningful. This increases their feelings of competence and control, which fosters a positive outlook on one's future (Lerner, 1978) as well as a positive reconstruction of one's life course (Lipkus and Siegler, 1993). These positive impressions should result in a stable mental health, namely in a positive subjective well-being and a strong self-esteem. A second argument stresses the role of just world beliefs for people normally engaged in their everyday activities. The belief in a just world, in which other people behave fairly and in which oneself gets what one deserves can be interpreted as an important precondition for one's actions. This belief allows people to feel relatively safe about not to being treated unfairly as far as they themselves "play it straight." The more people believed in a just world, the less they were stressed and threatened by a laboratory math task and the better were their results (Tomaka and Blascovich, 1994). Furthermore, the belief that good deeds will be rewarded equips people in need to invest in their own good future, as was evidenced by Zuckerman (1975). Finally, recent experiments support the hypothesis that the belief in a just world fosters investment in long-term goals (Hafer, in press). These examples furnish evidence of the belief in a just world's positive impact on one's daily functioning, which should result in

positive mental health. A third argument about the belief in a just world's impact on mental health deals with the coping processes of victims of an unjust fate. Because the belief in a just world serves important adaptive functions, victims of an unjust fate are motivated to defend their belief in a just world. Some of these just world-motivated coping reactions can sustain one's mental health. For example, the more unemployed subjects believed in a just world, the lower the probability that they ruminated about the "why me?" question, and for those not ruminating about this question, the belief in a just world was negatively correlated with the subjects' depression (Dalbert, 1997). However, not all just world motivated coping reactions (e.g., just world motivated internal attributions) support the victim's subjective well-being (Dalbert, 1996). Therefore, belief in a just world and subjective well-being can be independent of one another within samples of victims of an unjust fate.

The more just world research concentrates on the mental health area, the more a differentiation between a general and a more personal belief in a just world may become important. Lerner and Miller (1978) argued that general and personal belief should be differentiated as have others (Furnham and Procter, 1989; Hafer and Olson, 1993). The more personal an experience of injustice, the more threatening and the more it will be denied. Injustices and discriminations will be more strongly denied in one's own group than in other groups (Dalbert and Yamauchi, 1994); one's own discrimination will be more strongly denied than discrimination of one's group (Taylor *et al.*, 1990); and one's own superior fairness will be emphasized (Farwell and Weiner, 1996; Messick *et al.*, 1985). Consequently, the belief in a just world in general and the belief in one's own fate as just should be differentiated as well, and individuals should endorse more strongly the belief in a personal just world compared to a general just world. Moreover, the personal belief in a just world compared to the general belief in a just world should be more important in predicting mental health and coping. A first empirical test of this distinction was provided by Lipkus *et al.* (1996). Their study evidenced that the personal belief in a just world (here: belief in a just world for self that was based on the Lipkus' just world scale, 1991) could successfully be differentiated from a belief in a just world for others, and that the belief in a just world for self was more important in predicting psychological well-being.

In the following studies personal belief in a just world was assessed with a newly developed personal belief in a just world scale. The aims of the following four questionnaire studies were a test of the new scale's properties, a replication of Lipkus *et al.*'s main results (1996), and an enlargement of the mental health dimensions predicted by belief in a just world. The general belief in a just world can be assessed with the General Belief in a Just World Scale developed by Dalbert *et al.* (1987; studies with the English version of this scale, e.g., Dalbert and Yamauchi, 1994; Furnham and Beard, 1995). One construction target of this general just world scale was to disentangle the belief in a just world and the endorsement of

the equity principle as a just distribution principle (Dalbert, 1982). The mix of both constructs was seen as one reason for the heterogeneity of the original belief in a just world scale (Rubin and Peplau, 1973, 1975). The tendency to mingle both may be a cultural bias as is evidenced by a significant correlation (Dalbert, 1996) between the endorsement of the equity principle and Lipkus' just world scale (1991), which was not true for Dalbert *et al.*'s just world scale (1987). Based on Dalbert *et al.*'s general just world scale (1987) the Personal Belief in a Just World Scale was developed. In Study 1, the hypothesis that the items describing general and personal belief in a just world form two homogeneous, but distinct scales was tested. Afterwards, mean differences between both scales and their correlations with several mental health indicators were tested.

Besides life satisfaction as the well-being dimension most consistently correlated with belief in a just world (Dalbert, 1998; Lipkus *et al.*, 1996), mood level ("how do I usually feel?") as emotional well-being indicator was assessed (Study 2 and 4; e.g., Dalbert, 1992a). In addition, actual positive and negative moods ("how did I feel in the last week?") were measured in the Study 4. The relationship between general just world belief and variables describing the actual mood state of the subjects was investigated several times, but remained unclear. No direct relationship between general just world belief and negative actual mood or depression was found in studies with different samples like unemployed individuals (Dalbert, 1993a; 1996), mothers of a disabled child (Dalbert, 1996), or students (Dalbert, 1993a; Lipkus *et al.*, 1996). Benson and Ritter (1990) observed a positive (maladaptive) relationship between just world belief and depression in unemployed subjects, but a negative (adaptive) relationship within a sample of employed individuals. On the other hand, evidence for a significant and positive relationship between general just world belief and actual positive mood was reported by Bulman and Wortman (1977), Lerner and Somers (1992), and Dalbert (1993a). Additionally, self-esteem as another important mental health dimension (Becker, 1986) was measured (Studies 3 and 4). Personal belief in a just world and self-esteem should be positively and stronger correlated than general belief in a just world and self-esteem, which in fact were only slightly or nonsignificantly correlated in other studies (Dalbert, 1993a, 1996).

People tend to describe themselves as fairer than others (Farwell and Weiner, 1996; Messick *et al.*, 1985). Favorable self-perceptions like behaving fairly are part of one's *self-concept* and should positively affect one's self-esteem. The more subjects are aware of their own fair behavior, the better their self-esteem should be. In contrast to self-perceptions, beliefs in a just world depict *world* theories. Therefore, the beliefs in a just world's positive impact on one's self-esteem should be independent of a possible effect of favorable self-perceptions such as behaving fairly. By contrast with being aware of one's own fair behavior, the effects of conceding own unfair behavior on self-esteem are far less clear. For example, unfair behavior may be motivated by self-interest and may be interpreted as assertive behavior, or own unfairness may be seen as hurting other people and may be

interpreted as expression of a bad character. Thus, positive as well as negative main effects on self-esteem are both possible.

The role of unfairness becomes clearer if the interaction of self-perceptions and just world beliefs are considered. Beliefs in a just world should have positive impacts on self-esteem as long as the individuals see themselves as fair subjects. Nice people should behave fairly in a just world. What happens if subjects are aware of their own unfair behavior? If subjects do not believe in a just world, their own unfairness may be justified in terms of self-interest. However, the more subjects believe in a just world, the more own unfairness should threaten their self-esteem. Behaving unfair in a just world is against the personal contract (Lerner, 1977) and cannot be justified.

In summary, three hypotheses about the beliefs in a just world and self-perceptions were tested in an experiment. Self-esteem should be better the more subjects are aware of their own fair behavior and the more they endorse the beliefs in a just world. However, self-esteem should be lower the more one is aware of one's own unfairness and at the same time believes in a just world. The predicted effects should be more true for the personal compared to the general just world belief.

Overall, the following hypothesis were to be tested in the four questionnaire studies and one experiment described in the subsequent paragraphs. (a) The belief that oneself is treated fairly can reliably be differentiated from the belief that the world is generally a just place. (b) Individuals endorse more strongly the belief in a personal just world than in a general just world. (c) The personal belief in a just world compared to the general just world belief correlates more strongly with subjective well-being and self-esteem. (d) Beliefs in a just world have positive impacts on one's self-esteem independent of favorable justice-related self-perceptions, and this is especially true for the personal belief in a just world. (e) The more subjects are aware of their own unfairness, the more the (personal) belief in a just world has a negative impact on self-esteem.

## THE QUESTIONNAIRE STUDIES

In the next section, the results of four questionnaire studies are presented. Subjects of each study came from different German universities or colleges. None had psychology as major, but most of them were enrolled in introductory psychology courses. In all studies, the subjects completed the belief in a just world questionnaire, which consists of the two just world scales' items in random order. In Study 1, the just world beliefs' factor structure was explored and the mean difference was tested. In the following studies, self-report measures of mental health were administered additionally and, besides the replication of the first study's results, the correlational pattern of the just world beliefs and the mental health indicators were tested. In Study 4, the results of Study 2 and 3 should be replicated and extended.

## METHOD

*Sample 1:* 247 female students took part in the study. The age varied between 19 and 50 years ( $M = 24.1$ ;  $SD = 4.75$ ).

*Sample 2:* 149 (58 male and 91 female) students took part in the study. The age varied between 19 and 40 years ( $M = 24.5$ ;  $SD = 4.64$ ).

*Sample 3:* 65 (46 male and 19 female) students took part in the study. The age varied between 19 and 60 years ( $M = 25.6$ ;  $SD = 6.42$ ).

*Sample 4:* 171 (62 male and 105 female; missing data:  $n = 4$ ) students took part in the study. The age varied between 19 and 42 years ( $M = 24.5$ ;  $SD = 4.834$ ).

*Questionnaires:* Study 1 was a large scale study in which the just world questionnaire was included comprising the six items of the General Belief in a Just World Scale (Dalbert *et al.*, 1987) and the seven items of the Personal Belief in a Just World Scale (Dalbert, 1993b) in random order (see Table I). In

**Table I.** Factor Loadings ( $1 \geq .30$ ) for the Two Factor Model of the General and the Personal Belief in a Just World Scale (Oblimin Rotation)

Item	Sample 1 $N = 240$		Sample 2 $N = 202$		Sample 3 $N = 143$	
	(1)	(2)	(1)	(2)	(1)	(2)
(1) I think basically the world is a just place.		.66		.54		.70
(2) I believe that, by and large, people get what they deserve.		.70		.62		.66
(3) I am confident that justice always prevails over injustice.		.71		.84		.85
(4) I am convinced that in the long run people will be compensated for injustices.		.60		.73		.57
(5) I firmly believe that injustices in all areas of life (e.g., professional, family, politics) are the exception rather than the rule.		.53		.61		.74
(6) I think people try to be fairly when making important decisions.		.44		.66		.43
(7) I believe that, by and large, I deserve what happens to me.	.43		.40		.49	
(8) I am usually treated fairly.	.70		.86		.83	
(9) I believe that I usually get what I deserve.	.53	.30	.74		.78	
(10) Overall, events in my life are just.	.82		.84		.81	
(11) In my life injustice is the exception rather than the rule.	.81		.65		.71	
(12) I believe that most of the things that happen in my life are fair.	.76		.81		.81	
(13) I think that important decisions that are made concerning me are usually just.	.73		.61		.91	
Explained variance after rotation.	26.5	19.0	29.7	22.5	32.2	22.1
$\alpha$	.82	.68	.83	.78	.87	.73
Factor correlation.	.33		.48		.37	

Study 2 subjects first answered the 13-item just world questionnaire. The second questionnaire consisted of 15 items, and did not describe a just world belief or mental health. This questionnaire served as a filler and will not be discussed in this study. The last questionnaire was the 13-item Trait Well-Being Inventory (Dalbert, 1992b), consisting of a German version of the mood level scale of Underwood and Froming (1980) with 6 items ( $\alpha = .87$ ) and the 7 items General Life Satisfaction Scale (Dalbert *et al.*, 1984) describing satisfaction with one's present and past life and with one's future perspectives ( $\alpha = .90$ ). The items of this life satisfaction scale are comparable with the items of the life satisfaction scale developed by Diener *et al.* (1985) at the same time. As in Study 2, subjects of Study 3 first answered the just world questionnaire followed by a filler questionnaire consisting of 15 items, which will not be discussed in this study. The last questionnaire was the self-esteem scale of the Frankfurt Self Concept Scales (Deusinger, 1986) consisting of ten items ( $\alpha = .85$ ), which are comparable to the items of Rosenberg's Self-Esteem Scale (1965). In Study 4 subjects first answered the 13-item just world questionnaire followed by a filler questionnaire consisting of 18 items, which will not be discussed in this study. The third questionnaire consists of the 13-item Trait Well-Being Inventory (Dalbert, 1992b; mood level:  $\alpha = .85$ ; life satisfaction:  $\alpha = .82$ ) already used in Study 2, and the 10-item self-esteem scale of the Frankfurt Self Concept Scales ( $\alpha = .87$ ; Deusinger, 1986) already used in Study 3 in random order. Subjects responded to all other items so far on a 6-point Likert-type scale ranging from strongly disagree (=1) to strongly agree (=6). Finally, actual positive and negative mood states were measured with German scales (Dalbert, 1992b) partly adopted from the Profile of Mood States (McNair *et al.*, 1971) consisting of 11 adjectives measuring negative mood ( $\alpha = .88$ ; sadness: 3 items; hopelessness: 3 items; tiredness: 4 items) and 6 adjectives measuring positive mood ( $\alpha = .94$ ) "in the last week." The adjectives were rated on a 7-point Likert-type scale with endpoints 1 "not at all" to 7 "very strong." Thereby, positive mood level and actual positive mood differ by their response format as well as their time framing with mood level asking generally without time framing and actual positive mood asking for mood in the last week. The unweighted scale means were used as scale values with high values indicating a strong construct.

## RESULTS

### Structure of the Just World Beliefs—Study 1

A principal component analysis was done with the 13 just world items. The factor solution revealed three eigenvalues  $>1$  (4.09, 1.82, 1.32, .88). In line with the theoretical considerations, two factors were interpreted. These two factors explained 45.5% of the variance. The oblimin rotated factor solution revealed the expected pattern; factor loadings are depicted in Table I. The first factor was best

described by the seven personal just world items with factor loadings varying between  $1 = .43$  and  $1 = .82$ . The second factor was marked by the six general just world items with factor loadings varying between  $1 = .44$  and  $1 = .71$ .

The mean was built over the six general just world items to measure general belief in a just world ( $\alpha = .68$ ), and the scale mean over the seven personal just world items was used to measure belief in a personal just world ( $\alpha = .82$ ). Here, and for all other scales reported throughout this paper, a scale mean was defined as missing with more than one item value missing. If only one item value was missing, the scale mean was built over the remaining items. Both just world scales correlated significantly ( $r = .37$ ;  $p < .001$ ), and subjects believed more strongly in a personal ( $M = 3.99$ ;  $SD = .79$ ) than in a general just world ( $M = 2.34$ ;  $SD = .77$ ;  $t(1,246) = -29.51$ ;  $p < .001$ ).

### Structure of the Just World Beliefs—Replication 1

A total of 214 subjects participated in Study 2 and 3, and this sample was used for replication 1. The principal component analyses revealed three eigenvalues  $>1$  (5.27, 1.51, 1.09, .90). The results of the subsequent oblimin rotation of the 2 factor solution are depicted in Table I. In line with the theoretical considerations, two factors were interpreted. Again, the first factor was best described by the seven personal just world items, and the second factor was marked by the six general just world items. As in the first study, subjects believed more strongly in a personal ( $M = 4.20$ ;  $SD = .77$ ) than in a general just world ( $M = 2.65$ ;  $SD = .93$ ;  $t(1, 210) = -26.88$ ;  $p < .001$ ), and the just world scales were significantly correlated (Study 2:  $r = .54$ ;  $p < .001$ ; Study 3:  $r = .53$ ;  $p < .001$ ).

### Structure of the Just World Beliefs—Replication 2

Sample 4 was used for replication 2. The factor solution revealed three eigenvalues  $>1$  (5.06, 2.00, 1.08, .95). In line with the theoretical considerations, two factors were interpreted. The results of the principal component analyses with subsequent oblimin rotation are depicted in Table I. Again, the first factor was best described by the seven personal just world items and the second factor was marked by the six general just world items. As in the other studies subjects believed more strongly in a personal ( $M = 3.95$ ;  $SD = .93$ ) than in a general just world ( $M = 2.37$ ;  $SD = .82$ ;  $t(1,155) = -21.00$ ;  $p < .001$ ), and the just world scales were significantly correlated ( $r = .42$ ;  $p < .001$ ). In total, the first study's result were successfully replicated in two independent samples.

### Intercorrelations

The correlations between the just world scales and the well-being dimensions (Study 2) and self-esteem (Study 3) are depicted in Table II. A priori t-tests



**Table II.** Correlations (*r*) and Regression Models for Mood Level, Life Satisfaction, and Self-esteem on General and Personal Belief in a Just World in Studies 2 and 3

Predictor	<i>R</i>	<i>R</i> <sup>2</sup> -change	<i>T</i>	<i>p</i>	<i>r</i>
Mood level ( $F_{total} = 21.891$ ; $df = 2/143$ ; $p < .001$ )					
General belief in a just world	.35	.13 <sup>c</sup>	1.626	.106	.35 <sup>c</sup>
Personal belief in a just world	.48	.11 <sup>c</sup>	4.513	<.001	.47 <sup>c</sup>
Life satisfaction ( $F_{total} = 28.545$ ; $df = 2/143$ ; $p < .001$ )					
General belief in a just world	.39	.15 <sup>c</sup>	1.770	.079	.39 <sup>c</sup>
Personal belief in a just world	.53	.14 <sup>c</sup>	5.219	<.001	.52 <sup>c</sup>
Self-esteem ( $F_{total} = 6.287$ ; $df = 2/61$ ; $p = .003$ )					
General belief in a just world	.31	.10 <sup>a</sup>	1.059	.294	.31 <sup>a</sup>
Personal belief in a just world	.41	.07 <sup>a</sup>	2.314	.024	.39 <sup>b</sup>

<sup>a</sup> $p < .05$ .<sup>b</sup> $p < .01$ .<sup>c</sup> $p < .001$ .

revealed that none of the five variables were related to subjects' gender ( $ps > .25$ ). Additionally, a priori moderated regression analyses showed that none of the six relationships between just world beliefs and well-being or self-esteem differed between men and women ( $ps$  for the interaction terms  $> .08$ ). Personal belief in a just world was more strongly correlated with mood level and life satisfaction than was general belief in a just world (mood level:  $z = 1.71$ ;  $p = .044$ , 1-tailed; life satisfaction:  $z = 1.90$ ;  $p = .029$ , 1-tailed; Olkin and Siotani, 1964). However, both beliefs in a just world correlated significantly, but equally high with self-esteem ( $z = .72$ ;  $p = .236$ , 1-tailed; Olkin and Siotani, 1964).

In order to test whether personal belief in a just world could independently contribute in explaining the well-being indicators and self-esteem, stepwise multiple regression analyses were done, with general belief in a just world entered in the first step and personal belief in a just world entered in the second step. These multiple regression analyses revealed (see Table II) that personal belief in a just world could explain a significant amount in mood level (+11%), life satisfaction (+14%), and self-esteem (+7%), in addition to the amount already explained by the general belief in a just world. Moreover, general belief in a just world could no longer contribute in explaining mood level, life satisfaction, or self-esteem when controlled for personal belief in a just world.

For the three dependent variables tested here, personal belief in a just world was more important in predicting mental health than general belief in a just world. The more subjects believed that they are usually treated fairly, the better their mood level and self-esteem and the more they were satisfied with their life in general. This showed true when controlled for general belief in a just world.

The correlations between the just world scales and the five mental health dimensions measured in Study 4 are depicted in Table III. A priori t-tests revealed that none of the seven variables were related to subjects' gender ( $ps > .35$ ), and a priori moderated regression analyses showed that none of the ten relationships

**Table III.** Correlations (*r*) and Regression Models for Mood Level, Life Satisfaction, Self-esteem, Actual Positive and Negative Mood on General and Personal Belief in a Just World in Study 4

Predictor	<i>R</i>	<i>R</i> <sup>2</sup> -change	<i>T</i>	<i>p</i>	<i>r</i>
Mood level ( $F_{total} = 15.031$ ; $df = 2/153$ ; $p < .001$ )					
General belief in a just world	.35	.13 <sup>c</sup>	3.221	.002	.34 <sup>c</sup>
Personal belief in a just world	.41	.04 <sup>b</sup>	2.650	.009	.33 <sup>c</sup>
Life satisfaction ( $F_{total} = 19.806$ ; $df = 2/153$ ; $p < .001$ )					
General belief in a just world	.28	.08 <sup>c</sup>	1.392	.166	.27 <sup>c</sup>
Personal belief in a just world	.45	.13 <sup>c</sup>	4.966	<.001	.44 <sup>c</sup>
Self-esteem ( $F_{total} = 8.512$ ; $df = 2/153$ ; $p < .001$ )					
General belief in a just world	.18	.03 <sup>a</sup>	.756	.451	.19 <sup>a</sup>
Personal belief in a just world	.32	.07 <sup>a</sup>	3.352	.001	.31 <sup>c</sup>
Actual positive mood ( $F_{total} = 5.799$ ; $df = 2/150$ ; $p = .004$ )					
General belief in a just world	.23	.05 <sup>b</sup>	1.972	.050	.23 <sup>b</sup>
Personal belief in a just world	.27	.02	1.680	.095	.22 <sup>b</sup>
Actual negative mood ( $F_{total} = 1.908$ ; $df = 2/152$ ; $p = .152$ )					
General belief in a just world	.13	.02	-1.096	.275	-.14
Personal belief in a just world	.16	.01	-.998	.320	-.13

<sup>a</sup> $p < .05$ .

<sup>b</sup> $p < .01$ .

<sup>c</sup> $p < .001$ .

between just world beliefs and mental health differed between men and women ( $ps$  for the interaction term  $> .15$ ). Personal belief in a just world was significantly stronger correlated with life satisfaction and slightly stronger with self-esteem than was general belief in a just world (life satisfaction:  $z = 2.16$ ;  $p = .015$ , 1-tailed; self-esteem:  $z = 1.46$ ;  $p = .072$ , 1-tailed; Olkin and Siotani, 1964). However, personal and general belief in a just world were equally strongly correlated with mood level and actual positive mood, and both were not significantly correlated with actual negative mood.

Again, stepwise multiple regression analyses were done with general belief in a just world entered in the first step and personal belief in a just world entered in the second step. These multiple regression analyses revealed (see Table III) that personal belief in a just world could explain a significant amount in mood level (+4%), life satisfaction (+13%), self-esteem (+7%), and a marginally significant amount in actual positive mood (+2%;  $p = .095$ ) in addition to the amount already explained by the general belief in a just world. On the contrary, general belief in a just world could only independently contribute in explaining mood level and actual positive mood when controlled for personal belief in a just world.

## EXPERIMENT

The questionnaire studies evidenced that personal and general belief in a just world could clearly be differentiated. Moreover, the results give support to the

hypothesis that the personal compared to the general just world belief correlates more strongly with subjective well-being and self-esteem. In the following experiment, subjects were made aware of their fair or unfair behavior and the following hypotheses were tested: Self esteem should be better (a) the more subjects are aware of their own fair behavior, and (b) the more subjects endorse the personal belief in a just world. However, (c) the more subjects are aware of their own unfair behavior, the more the personal belief in a just world should have a negative impact on self-esteem.

## Method

### *Sample 1*

Subjects were 108 students ( $n = 50$  male;  $n = 58$  female); none had psychology as major. The age varied between 18 and 57 years ( $M = 24.6$ ;  $SD = 6.08$ ).

### *Procedure*

In order to stimulate justice-related (un)favorable self-perceptions, a procedure introduced by Messick *et al.* (1985) in its German version tested by Bierhoff (1996) was used. In the *fairness condition* subjects described behavior that they would label fair. Additionally, they were instructed to begin their description with "I" if they think that they show this behavior more often than other people and to begin their description with "Other" if they think that others show this behavior more often. In the *unfairness condition* subjects were asked to describe behavior that they would label unfair. Subjects in the *control condition* were asked to give a list of their daily routines. All subjects were given 5 minutes to finish this task. Thirty-four subjects fulfilled the fairness condition, 36 subjects were asked to describe the unfair behavior, and 38 subjects participated in the control condition.

### *Dependent Variables*

After completing the first task, subjects were asked to participate in a questionnaire study. In this study, they first answered the justice questionnaire comprising the six items of the General Belief in a Just World Scale (Dalbert *et al.*, 1987;  $\alpha = .65$ ) and the seven items of the Personal Just World Scale (Dalbert, 1993b;  $\alpha = .79$ ) in random order. Afterwards, self-esteem was measured with the ten-item scale of the Frankfurt Self Concept Scales (Deusinger, 1986;  $\alpha = .84$ ). Subjects responded to all items on 6-point Likert-type scales ranging from strongly disagree (=1) to strongly agree (=6). The unweighted scale means were used as scale values with high values indicating a strong construct.

## Results

### *Experimental Control*

Two-way ANOVAs, with condition (fairness vs. unfairness) and gender as between-subjects factors, were done for the number of "I" and "Other" at the beginning of each example. For "I" a main effect for condition was revealed,  $F(1,66) = 10.65$ ,  $p = .002$  (14.5% variance explained); the gender's main effect ( $p = .238$ ) as well as the interaction term ( $p = .688$ ) were not significant. As described by other studies (Bierhoff, 1996; Messick *et al.*, 1985) subjects in the fairness condition gave more examples starting with "I" ( $M = 2.21$ ;  $SD = 1.92$ ) than subjects in the unfairness condition ( $M = .97$ ;  $SD = 1.00$ ). For "Other" a main effect for condition,  $F(1,66) = 6.54$ ,  $p = .013$  (9.7% variance explained), as well as for gender,  $F(1,66) = 4.22$ ,  $p = .044$  (5.4% variance explained), was revealed; the interaction term was not significant ( $p = .274$ ). Subjects in the unfairness condition gave more examples starting with "Other" ( $M = 2.39$ ;  $SD = 2.26$ ) than subjects in the fairness condition ( $M = 1.12$ ;  $SD = 1.59$ ), and women ( $M = 1.54$ ;  $SD = 2.23$ ) started more descriptions with "Other" than men ( $M = .70$ ;  $SD = 1.17$ ). Overall, subjects showed the expected tendency toward favorable self-perceptions.

### *Experimental Effects*

The effects of the experimental conditions were depicted by the four composites of a dummy variable for the condition weighted by the number of "I" or the number of "Other," respectively. Both beliefs in a just world were independent of the experimental conditions ( $ps > .11$ ). As expected, self esteem was higher the more the subjects described themselves as fair in the fairness condition ( $r = .24$ ;  $p = .012$ ; other  $ps > .37$ ).

Overall, self-esteem and personal belief in a just world were positively correlated ( $r = .19$ ;  $p = .056$ ; general just world belief:  $r = -.06$ ;  $p = .543$ ). The interaction between personal just world belief and the self-perceptions within the different experimental conditions were tested by a stepwise multiple regression with self-esteem as criteria. In the first step, the weighted variables for the experimental conditions were entered (fairness-I; fairness-Other; unfairness-I; unfairness-Other), personal just world belief was included in the second step, and the four interaction terms followed in the final step. A comparable moderated regression analysis was done with general belief in a just world. The results of the accepted regression ( $p < .05$ ) is given in Table IV.

No main effect or interaction effect was observed for the general belief in a just world ( $ps > .35$ ). Personal belief in a just world and its interaction with unfavorable self-perceptions in the unfairness condition could explain 9% of the

**Table IV.** Regression Model for Self-esteem on the Experimental Conditions Weighted by "I" or "Other", Respectively, General or Personal Belief in a Just World, and Their Interaction Terms (accepted model;  $p < .05$ )

Predictor	<i>R</i>	<i>R</i> <sup>2</sup> -change	<i>b</i>	<i>T</i>	<i>p</i>
<i>(F<sub>total</sub> = 4.356; df = 4/101; p = .003)</i>					
Fairness-"I"	.24	.06 <sup>a</sup>	.12	2.859	.005
Unfairness-"I"	.24	.00	.97		
Personal belief in a just world	.33	.05 <sup>a</sup>	.36		
Personal belief X Unfairness-"I"	.38	.04 <sup>a</sup>	-.24	-2.208	.029
(Constant)			3.30		

  

Condition	Regression equation	Personal belief	Self-esteem
Control condition	3.30 + .36 personal belief	3.76 5.00	4.65 5.10
Fairness condition/"I" = 0	3.30 + .36 personal belief	3.76 5.00	4.65 5.10
Fairness condition/"I" = 3	3.66 + .36 personal belief	3.76 5.00	5.01 5.46
Unfairness condition/"I" = 0	3.30 + .36 personal belief	3.76 5.00	4.65 5.10
Unfairness condition/"I" = 3	6.21 - .36 personal belief	3.76 5.00	4.86 4.41

<sup>a</sup>  $p < .05$ .

self-esteem's variance in addition to the 6% already explained by the favorable self-perceptions in the fairness condition (see above). The regression equations for the different experimental conditions as well as the expected values for self-esteem under different conditions and a high ( $M + SD$ ) or low ( $M - SD$ ) personal belief in a just world are depicted at the bottom of Table IV. As can be seen from these equations, the personal belief in a just world had the same positive effect ( $b = .36$ ) on self-esteem in (a) the control condition, (b) in the fairness condition in addition to the expected positive effect of a favorable self-perception, and (c) in the unfairness condition as long as no unfavorable self-perception could be observed ("I" = 0). In these three conditions, self-esteem was better the more subjects endorsed the belief in a personal just world. However, the more unfavorable self-descriptions were given ("I show unfair behavior"), the stronger the negative effect of personal belief in a just world on self-esteems. Perceiving oneself as behaving unfair in a world in which one usually is treated fairly seems to be a serious threat to one's self-esteem.

## DISCUSSION

The overall result pattern supports the hypothesis that personal and general belief in a just world should be differentiated. The factor pattern evidenced triplicate

with a total of 632 subjects that a 2-factor model with one factor underlying the general just world items and another factor underlying the personal just world items was most appropriate in explaining the observed item-intercorrelations. Moreover, individuals were more convinced of a personal compared to a general belief in a just world, which was true in all four studies.

This clear structural figure was accompanied by a convincing validity pattern. Overall, the four questionnaire studies revealed that the personal compared to general belief in a just world better predicted mental health. Mental health was indicated by actual positive and negative mood, mood level, life satisfaction, and self-esteem. The more the subjects endorsed the personal belief in a just world the better their actual positive mood, their mood level and their self-esteem was and the more they were satisfied with their life. Three of these dimensions were tested twice. In both analyses the correlation with life satisfaction was significantly higher for personal compared to general belief in a just world; the correlation with mood level and self-esteem was stronger for personal compared to general belief in a just world only in one of both tests. A sharp exception was actual negative mood, which was not correlated with both just world beliefs.

The results of the multiple regression analyses were unanimous. Personal belief in a just world could independently contribute in predicting mental health when controlled for general just world belief. This was true in six out of seven tests. In the case of actual positive mood, there was only a tendency in the hypothesized direction. In total, personal belief in a just world seems to contribute particularly to the subjects' mental health. On the contrary, general just world belief could not independently contribute in explaining mental health when controlled for personal just world belief. This was true in five out of seven tests. These results support the notion that the personal belief in a just world compared to general belief in a just world is more important in explaining mental health. Moreover, when controlled for personal just world belief, general just world belief is independent of subjective well-being or self-esteem. Or to state it otherwise, it seems to be the common variance of general and personal just world belief that establishes the positive relationship between general just world belief and well-being or self-esteem, and it is only the personal belief in a just world that shares unique variance with mental health.

The experiment's results are well in line with the hypotheses. The more subjects described themselves as behaving fairly more often than other people, the better their self-esteem. However, the experimentally induced awareness of one's own fair or unfair behavior did not alter the beliefs in a just world themselves. This result pattern gives evidence to the notion that the beliefs in a just world depict world views that cannot be altered by self-perceptions. In line with the questionnaire studies' results, it was again the personal and not the general belief in a just world that showed a positive impact on self-esteem; and the personal belief in a just world's positive effect was not reduced by the positive impact of favorable self-perceptions

on self-esteem. The more the subjects endorsed the personal belief in a just world, the better their self-esteem was, and this was equally true for the three experimental conditions as long as no unfavorable self-descriptions were given. Moreover, for the general belief in a just world, no such effects were observed. Once more, the results emphasize the notion that the personal compared to the general belief in a just world is more important in explaining self-esteem and well-being. Furthermore, the experiment's results underline that an unfavorable self-perception can qualify the personal belief in a just world's effect on self-esteem. Thereby, the different character of self-perceptions and world views is further highlighted.

Behaving unfairly in a personal just world seems to reduce one's self-esteem. The more subjects describe themselves as behaving unfair more often than other people the stronger the negative impact of personal belief in a just world on self-esteem was. The belief in a just world can be interpreted as indicating a personal contract (Lerner, 1977) between the subject and his/her social world. The more subjects endorse the belief in a just world, the higher the obligatory nature of the personal contract should be. The personal contract regulates the interdependence between the subject and its social world in important ways. This contract includes the obligation to strive for justice with one's own reactions and, as a consequence, one can trust in being treated fairly by others. Describing oneself as behaving unfairly in a world in which one usually is treated fairly violates this personal contract and, consequently, seems to be a serious threat to one's self-esteem. Behaving unfairly in a personal just world supports the notion that one is a less valuable person. Behaving unfairly in an unfair world did not affect the self-esteem. Those perceiving themselves as behaving more unfairly than others and with a weak belief in a personal just world did not significantly differ in their self-esteem from subjects giving no such self-descriptions at all. The less one believes in a just world, the less one feel obliged to behave fairly and, consequently, unfair behavior is not against the rules. Unfair behavior in an unfair world can be seen as motivated by justified self-interest. The result pattern clearly evidenced that unfair behavior is not per se a threat to one's self-esteem. It depends on whether the unfairness violates the individual's personal contract. Moreover, this underlines that the belief in a just world must be taken into account for fully understanding the meaning of (un-)fairness for the individual him/herself.

For further differentiation between a personal and a general belief in a just world, subjects' relationships with different coping reactions could be tested. Just world research has evidenced that the more subjects believed in a general just world, the lower was the probability of describing oneself as a victim of discrimination (Lipkus and Siegler, 1993), the less procrastination (Ferrari and Emmons, 1994) or wishful thinking (Rim, 1986) could be observed, and the higher the probability of problem-orientation was (Rim, 1986). The more the victims of a critical life event believed in a general just world, the less they evaluated their

fate as unfair (Dalbert, 1996), the lower the probability of ruminating about the “why me?” question (Dalbert, 1997), and the higher the probability of blaming oneself for one’s burdening fate (e.g., Dalbert, 1996; Kiecolt-Glaser and Williams, 1987). The personal compared to the general belief in a just world should better explain just world motivated coping reactions. Further investigations of the relationship between just world beliefs and coping have additionally highlighted the relationship between just world beliefs and negative mood (Dalbert, 1996, 1997). Coping reactions particularly mediate the just world beliefs’ effect on negative mood, which may be especially true for personal belief in a just world.

Overall, the results support the notion that the general and personal belief in a just world should be disentangled (see Appendix for the separate scales). Individuals were convinced that the world is more just for them personally than in general, and the personal compared to the general belief in a just world was more important in explaining mental health. Therefore, in further studies examining the personal instead of the social consequences of (un-)fairness, the belief in a personal just world should be taken into account. Finally, the beliefs in a just world’s character as world view and as indicator of a personal contract between individual and the social world was highlighted.

## ACKNOWLEDGMENTS

I thank Josef Held, Günter L. Huber, Jürgen Roth (Study 1), Peter K. Warndorf (Study 2; Experiment), and Johannes E. Brunner (Study 4) for their assistance in collecting the data and Joachim Stöber for helpful comments.

## APPENDIX

### Justice

Below you will find various statements. Most likely, you will strongly agree with some statements, and strongly disagree with others. Sometimes you may feel more neutral.

Read each statement carefully and decide to what extent you personally agree or disagree with it. Circle the number which corresponds to this judgement. Make sure you circle a number for every statement.



		strongly agree	agree	slightly agree	slightly disagree	disagree	strongly disagree
1	I believe that, by and large, I deserve what happens to me.	6	5	4	3	2	1
2	I am usually treated fairly.	6	5	4	3	2	1
3	I believe that I usually get what I deserve.	6	5	4	3	2	1
4	Overall, events in my life are just.	6	5	4	3	2	1
5	In my life injustice is the exception rather than the rule.	6	5	4	3	2	1
6	I believe that most of the things that happen in my life are fair.	6	5	4	3	2	1
7	I think that important decisions that are made concerning me are usually just.	6	5	4	3	2	1

PBJW © Dalbert; Martin-Luther-Universität Halle-Wittenberg

### Justice

Below you will find various statements. Most likely, you will strongly agree with some statements, and strongly disagree with others. Sometimes you may feel more neutral.

Read each statement carefully and decide to what extent you personally agree or disagree with it. Circle the number which corresponds to this judgement. Make sure you circle a number for every statement.

		strongly agree	agree	slightly agree	slightly disagree	disagree	strongly disagree
1	I think basically the world is a just place.	6	5	4	3	2	1
2	I believe that, by and large, people get what they deserve.	6	5	4	3	2	1

(Continued)

		strongly agree	agree	slightly agree	slightly disagree	disagree	strongly disagree
3	I am confident that justice always prevails over injustice.	6	5	4	3	2	1
4	I am convinced that in the long run people will be compensated for injustices.	6	5	4	3	2	1
5	I firmly believe that injustices in all areas of life (e.g., professional, family, politics) are the exception rather than the rule.	6	5	4	3	2	1
6	I think people try to be fair when making important decisions.	6	5	4	3	2	1

GBJW © Dalbert, Montada & Schmitt; Martin-Luther-Universität Halle-Wittenberg

## REFERENCES

- Beck, A. T., Rush, A. J., Shaw, B. F., and Emery, G. (1981). *Kognitive Therapie der Depression* (Cognitive therapy of depression). Urban & Schwarzenberg, München.
- Becker, P. (1986). Theoretischer Rahmen. In Becker, P. and Minsal, B. (eds.), *Psychologie der seelischen Gesundheit* (Psychology of mental health) (S. 1–90). Hogrefe, Göttingen.
- Benson, D. E., and Ritter, C. (1990). Belief in a just world, job loss and depression. *Sociolog. Focus* 23: 49–63.
- Bierhoff, H. W. (1996). *Egozentrische Verzerrungen bei Fairness-Urteilen* (Egocentric bias in fairness judgments). Paper presented at the 40<sup>th</sup> congress of the German Society of Psychology.
- Bierhoff, H. W., Klein, R., and Kramp, P. (1991). Evidence for the altruistic personality from data on accident research. *J. Pers.* 59: 263–280.
- Bulman, R. J., and Wortman, C. B. (1977). Attributions of blame and coping in the "real world": Severe accident victims react to their lot. *J. Pers. Soc. Psychol.* 35: 351–363.
- Cantor, N. (1990). From thought to behavior. *Am. Psychologist* 45: 735–750.
- Dalbert, C. (1982). Der Glaube an die gerechte Welt. Zur Güte einer deutschen Version der Skala von Rubin & Peplau (*Berichte aus der Arbeitsgruppe "Verantwortung, Gerechtigkeit, Moral" Nr. 10*) (Reports from the research unit "Responsibility, Justice, Morality" No. 10). Universität Trier, Trier.
- Dalbert, C. (1992a). Der Glaube an die gerechte Welt: Differenzierung und Validierung eines Konstrukts (The belief in a just world: Differentiation and validation of a construct). *Zeitschrift für Sozialpsychologie* 23: 268–276.
- Dalbert, C. (1992b). Subjektives Wohlbefinden junger Erwachsener: Theoretische und empirische Analysen der Struktur und Stabilität (Young adults' subjective well-being: Theoretical and empirical analyses of its structure and stability). *Zeitschrift für Differentielle und Diagnostische Psychologie* 13: 207–220.
- Dalbert, C. (1993a). Gefährdung des Wohlbefindens durch Arbeitsplatzunsicherheit: Eine Analyse der Einflussfaktoren Selbstwert und Gerechte-Welt-Glaube (Endangering subjective well-being by job insecurity: An analysis of the impact of self-esteem and belief in a just world). *Zeitschrift für Gesundheitspsychologie* 1: 235–253.
- Dalbert, C. (1993b). *The Personal Belief in a Just World Scale (PBJWS)*. Unpublished scale.

- Dalbert, C. (1996). *Über den Umgang mit Ungerechtigkeit. Eine psychologische Analyse* (Dealing with injustice. A psychological analysis). Huber, Bern.
- Dalbert, C. (1997). Coping with an unjust fate: The case of structural unemployment. *Soc. Just. Res.; Special Issue: "Job Loss, Unemployment, and Social Injustices"* 10: 175–189.
- Dalbert, C. (1998). Belief in a just world, well-being, and coping with an unjust fate. In Montada, L., and Lerner, M. J. (eds.), *Responses to victimization and belief in a just world*, Plenum, New York, pp. 87–105.
- Dalbert, C., Montada, L., and Schmitt, M. (1987). Glaube an eine gerechte Welt als Motiv: Validierungskorrelate zweier Skalen (Belief in a just world: Validity correlates of two scales). *Psychologische Beiträge* 29: 596–615.
- Dalbert, C., Montada, L., Schmitt, M., and Schneider, A. (1984). Existentielle Schuld: Ergebnisse der Item- und Skalenanalysen (*Berichte aus der Arbeitsgruppe "Verantwortung, Gerechtigkeit, Moral"*, Nr. 25) (Reports of the research group "Responsibility, Justice, Morality" No. 25). Universität Trier, Trier.
- Dalbert, C., and Yamauchi, L. (1994). Belief in a just world and attitudes toward immigrants and foreign workers: A cultural comparison between Hawaii and Germany. *J. Appl. Soc. Psychol.* 24: 1612–1626.
- Deusinger, I. M. (1986). *Die Frankfurter Selbstkonzeptskalen (FSKN)* (The Frankfurt Self Concept Scales). Hogrefe, Göttingen.
- Diener, E., Emmons, R. A., Larsen, R. J., and Griffin, S. (1985). The satisfaction with life scale. *J. Pers. Assess.* 49: 71–75.
- Epstein, S. (1990). Cognitive-experiential self-theory. In Pervin, L. A. (ed.), *Handbook of Personality Theory and Research*, Guilford Press, New York, pp. 165–192.
- Farwell, L., and Weiner, B. (1996). Self-perception of fairness in individual and group contexts. *Pers. Soc. Psychol. Bull.* 22: 868–881.
- Ferrari, J. R., and Emmons, R. A. (1994). Procrastination as revenge: Do people report using delays as a strategy for vengeance? *Pers. Ind. Diff.* 17: 539–544.
- Furnham, A., and Beard, R. (1995). Health, belief in a just world and coping style preferences in patients of complementary and orthodox medicine. *Soc. Sci. Med.* 40: 1425–1432.
- Furnham, A., and Procter, E. (1989). Belief in a just world: Review and critique of the individual difference literature. *Br. J. Soc. Psychol.* 28: 365–384.
- Hafer, C. L. (in press). Investment in long-term goals and commitment to just means drive the need to believe in a just world. *Pers. Soc. Psychol. Bull.*
- Hafer, C. L., and Olson, J. M. (1993). Beliefs in a just world, discontent, and assertive actions by working women. *Pers. Soc. Psychol. Bull.* 19: 30–38.
- Kiecolt-Glaser, J. K., and Williams, D. A. (1987). Self-blame, compliance, and distress among burn patients. *J. Pers. Soc. Psychol.* 53: 187–193.
- Lerner, M. J. (1965). Evaluation of performance as a function of performer's reward and attractiveness. *J. Pers. Soc. Psychol.* 1: 355–360.
- Lerner, M. J. (1970). The desire for justice and reactions to victims. In Macaulay, J., and Berkowitz, L. (eds.), *Altruism and Helping Behavior*, Academic Press, New York.
- Lerner, M. J. (1977). The justice motive: Some hypotheses as to its origins and forms. *J. Pers.* 45: 1–32.
- Lerner, M. J. (1978). "Belief in a just world" versus the "authoritarianism" syndrome . . . but nobody liked the Indians. *Ethnicity* 5: 229–237.
- Lerner, M. J., and Miller, D. T. (1978). Just world research and the attribution process: Looking back and ahead. *Psychol. Bull.* 85: 1030–1051.
- Lerner, M. J., and Simmons, C. H. (1966). The observer's reaction to the "innocent victim": Compassion or rejection? *J. Pers. Soc. Psychol.* 4: 203–210.
- Lerner, M. J., and Somers, D. G. (1992). Employees' reactions to an anticipated plant closure: The influence of positive illusions. In Montada, L., and Filipp, S. H. (eds.), *Life crises and experiences of loss in adulthood*, LEA, Hillsdale, N.J.
- Libow, J. A., and Doty, D. W. (1979). An exploratory approach to self-blame and self-derogation by rape victims. *Am. J. Orthopsychiatry* 49: 670–679.
- Lipkus, I. (1991). The construction and preliminary validation of a global belief in a just world scale and the exploratory analysis of the multidimensional belief in a just world scale. *Pers. Ind. Diff.* 12: 1171–1178.

- Lipkus, I. M., Dalbert, C., and Siegler, I. C. (1996). The importance of distinguishing the belief in a just world for self versus others. *Pers. Soc. Psychol. Bull.* 22: 666–677.
- Lipkus, I. M., and Siegler, I. C. (1993). The belief in a just world and perceptions of discrimination. *J. Psychol.* 127: 465–474.
- McNair, D. M., Lorr, M., and Doppleman, L. F. (1971). *EITS—Manual for the Profile of Mood States*. San Diego, California: Educational and Industrial Testing Service.
- Messick, D. M., Bloom, S., Boldizar, J. P., and Samuelson, C. D. (1985). Why we are fairer than others. *J. Exper. Soc. Psychol.* 21: 480–500.
- Olkin, J., and Siotani, M. (1964). *Asymptotic distribution functions of a correlation matrix*. Stanford, CA: Stanford University Laboratory for Quantitative Research in Education, Report No. 6. (cited from: J. Bortz (1989), *Statistik* (Statistics). Springer, Heidelberg).
- Rim, Y. (1986). Coping-Strategien, der Glaube an eine gerechte Welt, Konservatismus, Werteinstellungen und das Konfluenz-Modell (Coping strategies, belief in a just world, conservatism, value orientation, and the confluence model). *Schweizerische Zeitschrift für Psychologie* 45: 17–27.
- Rosenberg, M. (1965). *Society and the adolescent self-image*, Princeton University Press, Princeton.
- Rubin, Z., and Peplau, L. A. (1973). Belief in a just world and reactions to another's lot: A study of participants in the national draft lottery. *J. Soc. Issues* 29(4): 73–93.
- Rubin, Z., and Peplau, L. A. (1975). Who believes in a just world? *J. Soc. Issues* 31(3): 65–89.
- Taylor, D. M., Wright, G. C., Moghaddam, F. M., and Lalonde, R. N. (1990). The personal/group discrimination discrepancy: Perceiving my group, but not myself, to be a target for discrimination. *Pers. Soc. Psychol. Bull.* 16: 254–262.
- Taylor, S. E., and Brown, G. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychol. Bull.* 103: 193–210.
- Tomaka, J., and Blascovich, J. (1994). Effects of justice beliefs on cognitive appraisals of and subjective, physiological, and behavioral responses to potential stress. *J. Pers. Soc. Psychol.* 67: 732–740.
- Underwood, B., and Froming, W. J. (1980). The mood survey: A personality measure of happy and sad moods. *J. Pers. Assess.* 44: 404–414.
- Zuckerman, M. (1975). Belief in a just world and altruistic behavior. *J. Pers. Soc. Psychol.* 31: 972–976.