How is Well-Being Related to Membership in New Religious Movements? An Application of Person–Environment Fit Theory

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Ongoing public discussion about the consequences of membership in new religious movements (NRMs) and the lack of studies concerning the relationship between the fit of the person with his or her NRM and well-being together call for a theoretically based investigation of the phenomenon. Hence, this German study on new members of three NRMs applied person–environment fit theory to investigate whether the fit between persons' needs for autonomy and relatedness, on the one hand, and the commensurate supplies of the groups, on the other, are related to well-being and mental health. The regression model following Edwards (1994) predicted satisfaction with religious affiliation, mental health, and depression, but not life satisfaction and anxiety. Results indicate that, for autonomy and relatedness, well-being measures tend to decrease as supplies exceed needs. Little support was found for a moderator effect of centrality of religiosity. Overall, findings encourage the application of person–environment fit theory to the study of membership in (new) religious groups and call for further research.

L'actuel débat public sur les conséquences de l'adhésion à un nouveau mouvement religieux et l'absence d'études sur la relation entre l'adaptation de

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la personne à son groupe et son bien-être nécessitent une investigation fondée théoriquement. D'où cette recherche allemande sur les nouveaux membres de trois de ces mouvements: on est parti de la théorie de l'adéquation personne-environnement pour savoir si l'ajustement entre les besoins personnels d'autonomie et autres besoins analogues d'une part, et les réponses du groupe dans ce domaine d'autre part, étaient reliés au bien-être et à la santé mentale. Le modèle de régression d'Edwards (1994) porte sur la satisfaction concernant l'engagement religieux, la santé mentale et la dépression, mais pas sur l'anxiété et la satisfaction liée à l'existence. Les résultats indiquent que, pour ce qui est de l'autonomie et ce qui en dépend, les mesures relatives au bien-être ont tendance à décroître à mesure que l'offre excède les attentes. L'effet modérateur de la centralité de la religiosité n'a pas vraiment été confirmé. Globalement, ce que l'on a obtenu est en faveur de l'application de la théorie de l'ajustement personne-environnement à l'étude de l'adhésion à de (nouveaux) groupes religieux et incite à développer d'autres recherches.

INTRODUCTION

"I am much happier now", "I am no longer alone", "I have found guidance and inner peace"—in these and similar words, people who have joined new religious movements (NRMs) such as the Unification Church, Jehovah's Witnesses, Christian Science, Hare Krishna, the Osho Movement, or Sokka Gakkai testify to what they have gained from their new associations. On the other hand, people outside these groups—former members, relatives, the media, politicians—are suspicious of such reports and accuse the NRMs of manipulation and destructiveness. Their observations are dramatically different. Statements like "My daughter has been manipulated, she is no longer herself", "I suffered from the group pressure and anxieties", or head-lines like, "Destructive cults—a threat among us" illustrate these positions.

Although involvement in an NRM is uncommon in most countries and empirical studies have not confirmed the popular assumption that such association is likely harmful (Lilliston & Shepherd, 1999; Richardson, 1995), heated public discussions about why individuals join NRMs and how membership affects their well-being are taking place around the world (see, e.g. Robbins & Lucas, 2001). Fueled by media reports of sporadic outbursts of violence by single groups—e.g. the Solar Temple suicides in Switzerland, Canada, and France in 1994 and 1995; the Heaven's Gate mass suicide in California in 1997; and the subway gas attack of Aum Shinrikyo in Japan in 1995—serious allegations have been made against NRMs in general. In the course of the debate and in spite of vast theological and structural differences, all kinds of NRMs have been pejoratively labeled *cults* or *sects* (French: *sectes*, Italian: *sette*, Spanish: *sectas*, German: *Sekten*; cf. Melton, 2004), thereby suggesting that they are a danger to society and detrimental to the well-being and health of their members. In order to avoid the connotations of the ill-defined words *cult* and *sect*, scholars sought for alternative, more

neutral terms to name the many, usually rather small, religious groups and movements that arose in more recent times. Among others, the term *new religious movement* emerged which is the most common expression for this kind of religion and which is used in this paper. Although there is some definitional vagueness to the term NRM too (cf. Chryssides, 1999), it allows us to examine the members of a variety of groups without the a priori implication that they must be harmed.

In Germany, where the religious landscape has been traditionally determined by the two major Christian churches, the Protestant and the Roman Catholic, the "sect debate" has been especially vehement. Religious pluralism and religious choice are still uncommon, hence membership in NRMs is watched with suspicion. Widespread public concern and serious accusations against various NRMs perceived to be fundamentally different from the two major Christian churches and other world religions as well finally led to the appointment of a governmental commission on "So-called Sects and Psychogroups", which investigated these groups from 1996 to 1998. It came to the same conclusions as similar initiatives in other countries (e.g. the Dutch Government and the Committee on Psychiatry and Religion of the American Psychiatric Association in the 1980s): New religious and ideological movements are no threat to society as a whole. Commitment on the individual level, often only temporary, can offer benefits as well as pose risks. Moreover, the commission concluded that the fit between the needs of the person and what the religious group has to offer is a major determinant of entry into and exit from an NRM as well as the psychosocial consequences arising from association with it. Whereas a good fit between the person and the group was assumed to be conducive to individual well-being, a poor fit—which may develop over time—was understood to result in harmful consequences. At the same time, the commission noted a lack of sound empirical research, especially in Germany (Deutscher Bundestag Referat Öffentlichkeitsarbeit, 1998).

The hypothesis that there is a particular fit between an NRM and its members' personal characteristics found empirical support some time ago (e.g. Poling & Kenney, 1986; Sundberg, Latkin, Littman, & Hagan, 1990). However, there have not yet been empirical investigations of the relationship of such a fit with individual well-being. Similarly, although the assumptions underlying this hypothesis are similar to those of person–environment (P–E) fit theory (e.g. Edwards, Caplan, & Harrison, 1998; French, Rodgers, & Cobb, 1974; Harrison, 1985), the latter theory so far has not been applied to the study of membership in NRMs. It has mainly been used to address work-related questions.

The only application of P–E fit theory in the context of religion has been undertaken by Pargament and colleagues (Pargament, Johnson, Echemendia, & Silverman, 1985; Pargament, Tyler, & Steele, 1979), who studied the

relationship between the fit of Jewish, Protestant, and Catholic church/ synagogue members with their congregations and individual adaptation. In one study, they found that members with a high degree of fit with their church or synagogue differed from members with low fit in terms of their psychosocial competences; but none of the two groups displayed uniformly greater effectiveness across all competence scales that were applied (Pargament et al., 1979). A second study indicated that church members' personal functioning was related not only to the fit between their level of tolerance for ambiguity and the openness of the church, but also to the members' level of tolerance per se. In line with P–E fit theory, individuals' satisfaction with the church was positively related to tolerance of ambiguity among members of churches that were more open to different points of view and negatively related to tolerance of ambiguity among members of less open churches. However, the findings for general psychosocial effectiveness were mixed: A positive relationship between tolerance for ambiguity and trust and self-esteem was not only found for members of more open churches, but also for members of less open churches (Pargament et al., 1985). Unfortunately, this early and unique, but also critical, application of P–E fit theory to religion has received very little attention.

As the research of Pargament and colleagues illustrates, the relevance of P–E fit theory is not restricted to work-related questions. In a more recent empirical study applying P–E fit theory to both work and family domains, Edwards and Rothbard (1999) remind other researchers that "P–E fit theory applies to stress in all life domains" (p. 97). In our own study of the possible psychosocial consequences of *person–NRM fit* (i.e. the fit between an individual and an NRM), we are following Edwards and Rothbard's example while also adopting Edwards' methods from among the diversity of available conceptual and methodological perspectives (for an overview see, e.g. Kristof, 1996; Schneider, 2001). Edwards offers an approach that overcomes the problems related to the widely used single indexes of fit, especially difference scores. He conceptualises as three-dimensional the relationship among the paired person and environment components, and the variable of strain, and he recommends regression techniques and response surface methodology for its analysis (1994, 2002; Edwards & Parry, 1993). His approach has been applied in a number of different studies in recent years (e.g. Kristof-Brown, Barrick, & Stevens, 2005; Taris & Feij, 2001).

Application of P–E Fit Theory to the Study of NRMs and Research Questions

Given the public's enduring concerns about individuals' involvement in NRMs and the lack of sound research on it, especially in the European context, a theoretically based investigation of psychological adjustment in

relation to NRM membership seemed to us to be needed. Struck by the similarity of the assumptions regarding the role of fit in discussions about membership in NRMs to the assumptions of P–E fit theory, we decided to apply this theory to our topic of interest. Thus, assuming that P–E fit theory is a general theoretical framework equally applicable to various life domains, we hypothesised that the well-being of individuals who have joined NRMs can be predicted by fit as conceptualised by Edwards (e.g. 2002). In order to investigate this assumption, we reconceptualised the person–NRM fit as a needs–supplies fit (cf. e.g. Edwards et al., 1998).

We focused our analysis on the two fundamental dispositions that compose what Bakan (1966) calls "the duality of human existence": *agency*, as manifested in self-assertion and self-expansion; and *communion*, the participation of the individual in some larger whole, including other organisms. These two trends have been summed up more recently as individuality, or autonomy, and relatedness (Guisinger & Blatt, 1994; Ryan, 1991). Both aspects play an important role in NRM membership processes and influence satisfaction with membership. Studies indicate that close relationships and affective bonds to brothers and sisters in the faith are important to NRM members and affect well-being (cf. Dawson, 1998; Galanter, 1989). Moreover, there is evidence that satisfaction with membership is related to individual freedom within the group. Individuals exit NRMs when regulations and lifestyle regimentation interfere with the agentic impulse (e.g. Jacobs, 1989; Westphal, 2002). In our study, the potential supplies of the environment (S_E), the NRM—appreciative companionship, on the one hand, and individual freedom within the faith community, on the other—were conceptualised as commensurate characteristics of the person's needs (N_P) for relatedness and autonomy.

Because subjective P–E fit is currently considered to be the "critical pathway" to well-being, including mental health (Edwards et al., 1998, p. 30; Verquer, Beehr, & Wagner, 2003), we restricted our study to the investigation of subjective person–NRM fit. The relationship between person–NRM fit and well-being, however, cannot be assumed to be a simple one. The relative importance for the individual of the domain studied is thought to moderate the relationship between fit and well-being (Edwards & Rothbard, 1999). This assumption is of particular interest for the study of religious phenomena, for the moderator function of the centrality of religiosity has been of increasing interest in recent years. Studies indicate that the centrality of religiosity moderates the relationship between the contents of religiosity and psychosocial adjustment (Murken, Müller, Huber, Rüddel, & Körber, 2004; Pargament, Tarakeshwar, Ellison, & Wulff, 2001). Moreover, P–E fit has been shown to be related to different outcome measures in different ways. Fit in a particular life domain seems to be more closely related to well-being variables specific to that domain, such as satisfaction with it, than with general well-being measures such as mental health (Edwards & Rothbard, 1999).

Furthermore, the relationship between N_P–S_E fit and well-being can take different forms, for it varies from one need to another (Edwards et al., 1998). Because both dimensions studied pertain to basic psychological needs whose fulfillment is essential to human well-being (cf. also Deci & Ryan's, 1985, 2000, self-determination theory), it can be anticipated that well-being will increase as supplies increase towards needs. But we expect that well-being will decline when the supplies substantially exceed the needs. Just as Harrison (1985) assumed that too many contacts may threaten an individual's need for privacy, a surfeit of relationships in the context of an NRM can be negatively experienced. When an NRM expects an individual to behave more autonomously than he or she would want to, this can be hypothesised to be detrimental to the person's well-being, too, for it may interfere with his or her need for direction and orientation.

On the basis of the foregoing considerations we posed the following hypotheses: (1) For both dimensions, autonomy and relatedness, well-being increases as supplies increase towards needs; (2) For both dimensions, autonomy and relatedness, well-being decreases when autonomy and related-ness supplies substantially exceed needs; and (3) Centrality of religion moder-ates the relationship between N_P–S_E fit and well-being, such that the strength of the relationship rises with the magnitude of religion's centrality. In addition, we considered the possibility of a closer relation of N_P–S_E fit to domain-specific well-being (satisfaction with religious affiliation) than to domain-unspecific well-being (life satisfaction and mental health measures).

METHOD

Participants and Procedure

The present study is part of a large multimethod, longitudinal research project in Germany on psychosocial motives and consequences of self-chosen membership in NRMs. Participants were individuals who showed recent interest in or were new members of one of three so-called NRMs in Germany and had not been brought up in the group. The three groups included were a Pentecostal parish, the New Apostolic Church, and Jehovah's Witnesses. All were classified as "new" religions because they have arisen since the 19th century. Moreover, in contrast to the situation in the United States, where they are usually accepted as established religious groups, they are popularly perceived and classified in Germany as *Sekten* and they are therefore widely assumed to be destructive and dangerous. In order to ensure that the longitudinal investigation began as close to the initial contact with the NRM as possible, only believers who, in the spring of 2003, when the first measure was taken (t_1), had been affiliated with the group no more than two years after baptism or sealing (a specific New Apostolic sacrament) were eligible

for participation in the study. The religious N_P–S_E (and all other) measures described below were included at the third measuring time (t_3), in the summer of 2004, in order to enhance our understanding of the person–NRM fit. Of the 71 participants at t_1, 59 who were still in contact with the NRM at t_3 agreed to continue with this study. One case had to be excluded because the fit questionnaire was left incomplete, reducing the N to 58. Respondents ranged in age from 20 to 68 years ($M = 42.58$, $SD = 12.21$). Sixty-two per cent ($n = 36$) were women. The participants' education levels were as follows: One person left school without qualifications, 57 per cent ($n = 33$) finished secondary school, 17 per cent ($n = 10$) earned a qualification to enter college or university, and 24 per cent ($n = 14$) had a college or university degree.

Independent Variables

Needs and Supplies.   To measure needs and supplies in the context of membership in NRMs, we designed a questionnaire with commensurate person and religious-environment characteristics. It lists descriptions of some experiences that people can have in their faith community (see Appendix). For each statement, respondents were asked to indicate the extent to which it was (a) something that they found personally desirable, and (b) something that was available to them at that time. All items were rated on a 5-point scale, with "1" representing *not at all* and "5", *very much*.

In the light of theoretical considerations, we had originally developed two items for each of the dimensions of autonomy, relatedness, competence, and self-esteem. However, in spite of corroborating judgments by four colleagues in the field, empirical analysis did not support these four dimensions. Thus, exploratory factor analyses (principal component analyses with varimax rotation) were computed. Examination of scree plots suggested a two-factor solution for supplies and two- or three-factor solutions for needs. The eigenvalues (Kaiser-Guttman criterion, i.e. two eigenvalues greater than 1.0 for needs and supplies each) supported a two-factor solution for both needs and supplies, explaining 63 per cent and 67 per cent of the variance, respectively. Items with a factor loading of at least .6 were assigned to the four subscales. All of them fulfilled the criterion introduced by Fürntratt (1969; $a^2/h^2 > .5$, a = loading, h^2 = communality) which requires that a factor explains at least 50 per cent of a variable's communality. The two autonomy items constitute one factor, and together the two relatedness and two self-esteem items constitute a second factor (see Appendix), which we labeled relatedness. In retrospect, it is not surprising that the original self-esteem items load on the same factor as the relatedness items because they deal with just one aspect of self-esteem, that based on positive feedback from social contacts, which is also an aspect of relatedness (Schütz, 2000; Ryan, 1991). Although they cross-load for supplies, the good reliabilities of both relatedness scales

(supplies: .84; needs: .83) support the assignment of all four items to one scale. The two competence items were dropped.

Item ratings were averaged for each of the two needs as well as the two supplies dimensions. Following a suggestion by Edwards (1994), needs and supplies measures were scale-centered by subtracting the scale midpoint (i.e. 3) in order to facilitate interpretability of graphs.

Centrality of Religion.   The individual importance of religion was measured by using the 15-item Centrality Scale recently developed by Huber (2003, 2007). Respondents were asked to indicate either the personal importance of or frequency of engagement in religious forms of expression belonging to the five domains ideology, prayer, experience, worship, and cognitive interest (e.g. "How often do you reflect upon religious issues?" "How important is personal prayer to you?"). Responses were made on a 5-point scale ranging from *never/not at all* (0) to *very often/very much* (4). Item scores were summed to form one total score indicating centrality (i.e. salience) of religiosity.

Dependent Variables

Life Satisfaction.   The respondents' overall life satisfaction was assessed by the item "How satisfied would you say you are currently, all in all, with your life?" Participants were asked to respond to this statement on an 11-point scale with the anchors *totally dissatisfied* (0) and *totally satisfied* (10) (Wohlfahrtssurvey, 1998).

Satisfaction with Religious Affiliation.   A similarly constructed item, with the same response scale, was used to assess respondents' satisfaction with affiliation with the NRM: "How satisfied are you currently, all in all, with the affiliation with your faith community?"

Mental Health.   Conceptualised as the ability to cope successfully with external and internal demands, mental health was measured by the *Mental Health* subscale of the *Trierer Persönlichkeitsfragebogen* (Trier Personality Inventory; Becker, 1989). This subscale contains 20 incomplete sentences, such as "I am _____ able to look after my own interests." Respondents were asked to complete each statement by selecting one of four alternatives (1 = *almost never*; 4 = *almost always*), thereby indicating how frequently various behaviors, thoughts, and emotions occur for them. The summation of the individual item scores constituted the mental health score.

Anxiety and Depression.   The German version of the Hospital Anxiety and Depression Scale (Herrmann, Buss, & Snaith, 1995) was used to

assess anxiety and depression. The two subscales consist of seven items each, and responses are made on a 4-point scale ranging from 0 (*the symptom is absent*) to 3 (*the symptom is very severe*). Scores for anxiety and depression were reverse coded, so that higher scores represented greater well-being.

For all of the scales, missing data were handled according to test instructions. Internal consistencies of the scales were acceptable to good, with Spearman-Brown reliability coefficients for two-item scales of .69 and .77 and Cronbach's alphas for all other scales ranging from .73 to .88 (see Table 1).

ANALYSIS

In order to test the relationships between N_P–S_E fit and well-being, we adopted the polynomial regression approach as introduced by Edwards (1994; Edwards & Parry, 1993). Following Edwards and Rothbard (1999; Edwards & Parry, 1993), we used the quadratic regression equation

$$\mathbf{WB} = b_0 + b_1 S_E + b_2 N_P + b_3 S_E^{\ 2} + b_4 N_P^{\ 2} + b_5 S_E N_p + e$$

with WB representing well-being, S_E, supplies, and N_P, needs. In a second step, we generated three-dimensional surface plots of the relationships between needs, supplies, and well-being as estimated by the equation. We further analysed these graphs using response surface methodology (Edwards & Parry, 1993), focusing our analysis on the shape of each surface along the diagonal running from left to right across the horizontal plane, the $N_P = -S_E$ line. (For further details see Edwards & Parry, 1993; Edwards & Rothbard, 1999.)

For all regression computations, we used hierarchical regression analysis; all predictors were entered simultaneously. To test the moderating effect of centrality of religion, the five terms of the equation given above were multiplied by centrality of religion and the increment in R^2 was tested (cf. Edwards & Rothbard, 1999). All regression analyses were controlled for age and gender, given their potential correlation with well-being.

An alpha significance level of at least $p < .05$ was used for all analyses. Before conducting the analyses, we considered whether or not our sample size was sufficient for the calculations we proposed. According to the widely used rule of thumb regarding sample size in multiple regression, the ratio of the number of subjects to the number of predictors should be at least 10:1. Thus, with either 57 or 58 persons involved in each calculation—we had hardly any missing data—our sample size was judged adequate. According to Cohen (1988), with a sample size of 58, five predictors and a power of .80 render an effect size of $f^2 = .23$, which allows the detection of medium to large effects.

TABLE 1
Descriptive Statistics, Reliability Estimates, and Correlations Among Measures

Measure	Mean	SD	1	2	3	4	5	6	7	8	9	10
Supplies												
1. Relatedness	1.04	.74	(.84)									
2. Autonomy	.62	1.14	.49**	(.77)								
Needs												
3. Relatedness	1.32	.69	.63**	.28*	(.83)							
4. Autonomy	.76	1.16	.19	.73**	.32*	(.69)						
Centrality												
5. Centrality of religion	49.98	6.39	.44**	.24	.48**	.13	(.82)					
Dependent variables												
6. Satisfaction with religious affiliation	8.48	1.39	.51**	.14	.26*	–.06	.34**	(–)				
7. Life satisfaction	7.51	1.71	.24	.18	.07	.06	.20	.35**	(–)			
8. Mental health	64.31	8.04	.25	.26*	–.02	.17	.11	.30*	.44**	(.88)		
9. Anxiety rev.[a]	16.09	3.00	.18	.05	.08	.02	.25	.42**	.26*	.40**	(.73)	
10. Depression rev.[a]	18.14	2.92	.39**	.28*	.21	.13	.35**	.46**	.48**	.45**	.59**	(.81)

Note: N was either 57 or 58. Reliability estimates (Spearman Brown reliability coefficients for the two autonomy scales with only two items each; Cronbach's alphas for all other scales) are reported in parentheses along the diagonal. No alphas are given for one-item measures. As non-linearity was assumed for correlations between needs–supplies and well-being, all correlations are Spearman's Rhos.

[a] Rev. = reverse coded.

* $p < .05$; ** $p < .01$.

RESULTS

Table 1 shows descriptive statistics and correlations for all measures as well as reliability estimates for the scales. The means of the measures of needs and supplies were all above the scale midpoint, indicating that both needs are indeed important in the religious context, and that to a notable degree they are fulfilled by the religious groups. The descriptive statistics suggest that the means of the needs measures were a little higher than corresponding supplies measures. The fairly high correlations between needs and supplies regarding the same dimension point to a rather high degree of congruence between the needs and supplies as they are experienced by the individuals. The positive correlations between both relatedness measures, centrality of religion and satisfaction with religious affiliation, probably reflect the great importance of relational aspects in self-chosen NRM membership. For further details, see Table 1.

Regression Analyses

The results of all quadratic regression analyses are reported in Table 2. A consistent pattern emerged for the two dimensions of relatedness and autonomy: The coefficient of determination was significant for satisfaction with religious affiliation, mental health, and depression. The polynomial model explained between 26 per cent and 43 per cent of variance in well-being. In contrast, the coefficient of determination was not significant for life satisfaction and anxiety.

Otherwise, only a few of the regression coefficients were found to be significant. For autonomy, four of the five interaction terms ($S_E N_P$) were significant predictors, indicating that the interaction between supplies and needs had the largest association with well-being; for relatedness, the interaction term accounted for an increment in explained variance in mental health. All interaction terms were positive. Moreover, for relatedness, two of the quadratic needs coefficients and one quadratic supplies coefficient were found to be significant, all being negative. We refrain from discussing findings on regression coefficients in detail, for they allow for hardly any conclusions. In sum, substantial amounts of the variance in satisfaction with religious affiliation, mental health, and depression, can be predicted by N_P–S_E fit and, thus, indicate a good applicability of the model suggested by Edwards (1994, 2002; Edwards & Parry, 1993). However, some reservations are necessary, for life satisfaction and anxiety could not be predicted by the equation, and little support was found for the significance of the five regression coefficients.

Regression analyses that included centrality of religion showed that the variable added a significant increment of variance in only two of the 10

TABLE 2
Results from Quadratic Regressions of Well-Being on Supplies and Needs

Well-being	Results from quadratic regression (controlling for age and gender)						Surface analysis: Shape along $N = -S$ line		Moderator effect of centrality of religion	
	S_E	N_P	S_E^2	N_P^2	$S_E N_P$	R^2	$b_1 - b_2$	$b_3 + b_4 - b_5$	R_C^2	p
Relatedness										
Satisfaction with rel. aff.[a]	.952 (.780)	1.198 (.766)	-.181 (.302)	-.755 (.413)	.356 (.429)	.402**	-0.246	-1.292	.498**	.181
Life satisfaction	.345 (1.156)	-.085 (1.136)	-.319 (.448)	-.371 (.613)	.728 (.636)	.149	0.430	-1.418	.271	.259
Mental health	.150 (4.635)	3.403 (4.552)	-1.609 (1.794)	-5.027* (2.456)	5.573[a] (2.548)	.367**	-3.253	-12.209**	.425*	.517
Anxiety (reverse)	-.427 (1.946)	3.264 (1.911)	-.708 (.753)	-2.127* (1.031)	1.840 (1.070)	.197	-3.691	-4.675***	.294	.347
Depression (reverse)	2.770 (1.600)	1.687 (1.571)	-1.319* (.619)	-1.253 (.848)	1.054 (.880)	.426***	1.083	-3.626**	.477**	.542
Autonomy										
Satisfaction with rel. aff.[a]	.765 (.454)	-.696 (.430)	-.600 (.339)	-.007 (.298)	.631* (.271)	.262*	1.461*	-1.238*	.301	.799
Life satisfaction	1.031 (.613)	-.814 (.580)	-.612 (.457)	.335 (.402)	.269 (.366)	.131	1.845*	-.546	.222	.455
Mental health	-1.805 (2.437)	2.444 (2.308)	-.486 (1.817)	-3.110 (1.600)	4.463** (1.456)	.363**	-4.249	-8.059**	.481**	.115
Anxiety (reverse)	-1.524 (1.010)	1.045 (.957)	.342 (.754)	-1.195 (.663)	1.388* (.604)	.212	-2.569	-2.241	.458**	.006**
Depression (reverse)	.876 (.907)	.091 (.859)	-.985 (.676)	-.749 (.595)	1.230* (.542)	.330**	.785	-2.964**	.558***	.003**

Note: $N = 58$ (for life satisfaction, $N = 57$). For columns labeled S_E, N_P, S_E^2, N_P^2, and $S_E N_P$, table entries are unstandardised regression coefficients; standard errors are in parentheses (S_E = supplies of the environment, N_P = needs of the person). The column labeled R^2 indicates the variance explained by the five terms, controlling for age and gender (uncorrected coefficient of determination). Columns labeled $b_1 - b_2$ and $b_3 + b_4 - b_5$ represent the slope of each surface along the $N_P = -S_E$ line (b_1, b_2, b_3, b_4, and b_5, are the coefficients on S_E, N_P, S_E^2, N_P^2, and $S_E N_P$, respectively). The column labeled R_C^2 indicates the variance explained by the five terms when multiplied by centrality of religion, controlling for age and gender (uncorrected coefficient of determination). p indicates the significance of the difference between R^2 and R_C^2.
[a] Satisfaction with religious affiliation.
* $p < .05$; ** $p < .01$; *** $p < .001$.

computations, both involving autonomy. After inclusion of the moderator, anxiety could be predicted and the explained variance of depression rose from 33 per cent to 56 per cent. Overall, our third hypothesis—that centrality of religion strengthens the relationship between N_P–S_E fit and well-being—received little support.

The assumption that N_P–S_E fit is more strongly related to domain-specific than to overall well-being was investigated in an exploratory way and yielded mixed results. Although the coefficient of determination was not significant for life satisfaction for any of the dimensions, it was significant for satisfaction with religious affiliation for autonomy and relatedness, findings that support the assumption. However, the domain-unspecific outcome measures mental health and depression could be predicted for both dimensions. Moreover, the amount of variance in mental health and depression that was explained was not smaller than that of satisfaction with religious affiliation.
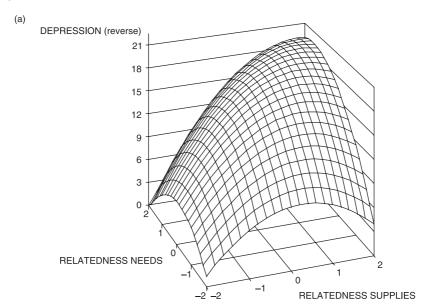
Surface Analyses

Figure 1 presents two surfaces, chosen from among the 10 estimated surfaces, to illustrate the relationships between needs, supplies, and depression. The $N_P = -S_E$ line runs from the back left corner to the front right corner of the graphs. Movement along the line represents growth of supplies towards needs, and after the $N_P = S_E$ line is crossed, supplies increasingly exceed needs. Analyses of surfaces along the $N_P = -S_E$ line are presented in Table 2. The value for $b_1 - b_2$ (representing the slope along the line at the point $S_E = 0$, $N_P = 0$) indicates how well-being changes as supplies increase toward needs. A positive value means an increase in well-being and a negative value means a decrease. The value for $b_3 + b_4 - b_5$ represents the curvature of the surface along the $N_P = -S_E$ line, with a positive value indicating that well-being increases, and a negative value indicating that well-being decreases as the excess of supplies grows.

Relatedness.   Table 2 shows that, for relatedness, no significant slope values ($b_1 - b_2$) were found. The curvature values ($b_3 + b_4 - b_5$) were always negative and for mental health, anxiety, and depression they were significant. Thus, the first hypothesis, that well-being would increase as supplies grow towards needs until the point $S_E = 0$, $N_P = 0$, was not supported; the second hypothesis, that well-being would decrease when supplies substantially exceed needs, was supported for mental health, anxiety, and depression. Figure 1a illustrates the surface for depression: a clear increase of well-being (i.e. decrease of depression) along the $N_P = -S_E$ line and a steep downward curvature after the $N_P = S_E$ line is crossed.

Autonomy.   For autonomy, a significant positive slope along the $N_P = -S_E$ line at the point $S_E = 0$, $N_P = 0$ could only be found for the two satisfaction

(a)

(b)

FIGURE 1.   Estimated surfaces relating N_P–S_E fit to depression, for (a) relatedness and (b) autonomy.

items, whereas the downward curvature along this line was significant for satisfaction with religious affiliation, mental health, and depression (see Table 2). Thus, our hypotheses that well-being would increase as supplies grow towards needs but not decrease before supplies substantially exceed needs were supported for satisfaction with religious affiliation and partially supported for life satisfaction, mental health, and depression. Figure 1b illustrates the increase of well-being as supplies grow towards needs as well as a distinct decline in well-being as supplies increasingly exceed needs. However, in contrast to Figure 1a, the surface is more flat, indicating that the effect of the needs–supplies interaction on depression is less severe for autonomy than for relatedness.

For both dimensions, some of the slope values were negative. Although none was significant, this negative tendency suggests that, in contrast to our expectation, scores on some well-being measures start to decrease even before supplies have reached the level of needs.

DISCUSSION

This study explored the assumption that well-being in the context of self-chosen membership in NRMs can be predicted by the fit between an individual's needs for autonomy and relatedness and commensurate supplies of the religious groups. Regression analyses partially supported the hypothesis that well-being is related to the interaction between needs and supplies. For satisfaction with religious affiliation, mental health, and depression, the model suggested by Edwards (1994) explained significant amounts of variance, thus indicating the potential of P–E fit theory as a general theory for understanding stress, although little can be said about the significance of the particular regression coefficients. It remains unclear why two other well-being measures, life satisfaction and anxiety, were not predicted by the equation. In general, stress (as a consequence of misfit) is related to reduced mental health and depression as well as to anxiety and reduced life satisfaction.

Only weak support was found for the hypothesis that centrality of religiosity moderates the relationship between N_P–S_E fit and well-being. On the one hand, it may be that the relevance of domain centrality as a moderator variable is, in general, overestimated (cf. the mixed results of Edwards & Rothbard, 1999). On the other hand, it can be assumed that the role of centrality was restricted in our study because the individuals studied were in general highly religious. If one accepts Huber's (2003) assumption that centrality of religiosity is a categorical rather than a continuous variable, then a majority of participants would belong to one category only (i.e. *highly religious*), so that hardly any effects of centrality could be found. Moreover, the significant correlation between relatedness measures and centrality of religiosity points to an association between the two constructs, at least in

the context of membership in the groups studied, which may explain why a moderator effect of centrality could only be found for the autonomy dimension.

Participants' high religiosity may also account for the observation that N_P–S_E fit was not consistently more strongly related to domain-specific well-being than to general well-being, although in other studies stronger effects were found for domain-specific outcome variables than for general well-being measures (e.g. Edwards & Rothbard, 1999; Taris & Feij, 2001). Because the ways of behaving, thinking, and experiencing of highly religious persons are permeated by their religiousness, general well-being can be expected to be influenced by religiosity as well.

Results from the analyses of the surfaces were mixed. In line with our hypotheses, the findings suggest that, for both dimensions, well-being decreases when supplies exceed needs. It can be assumed that an over-fulfillment of individual needs by an NRM correlates with internal and external conflicts that are detrimental to a person's well-being. Thus, the notion of fit seems helpful in understanding why many ex-members report negative experiences such as peer pressure and impairment of well-being in the context of membership in an NRM, whereas continuing members usually report sharply contrasting experiences. An increase of well-being as supplies grow towards needs could not be confirmed for relatedness and could only be partly confirmed for autonomy. The negative signs for some of the slope values indicate that well-being for some measures started to decrease even before supplies had reached the level of needs. This finding is in line with the assumption of optimal congruence models that small amounts of misfit can be more conducive to well-being than a perfect fit (cf. Edwards et al., 1998). Future studies should investigate further this interesting point. A thorough examination of the three-dimensional surfaces provides valuable information on the relationship between N_P–S_E fit and well-being, including initial increases in well-being as supplies grow towards needs, a tendency that the partitioned view of the response surface methodology does not reveal.

Limitations, Implications for Future Research, and Concluding Remarks

Although this study yielded some interesting results, it is limited by three major problems. First, the requirement that individuals included in our project be in the process of joining certain NRMs limited the size of our sample. Because there were hardly any missing data, however, the computation of regression analyses seemed justified (see above). Nevertheless, the relatively small number of participants may have prevented us from finding additional significant results. Furthermore, the sample size did not allow an extension of the analyses, for example, through cross-validation as suggested by Tinsley (2000) or by studying the interaction between the two dimensions of autonomy

and relatedness. It also did not permit a comparison of individuals from the three different NRMs, which would have been interesting in the light of Pargament et al.'s (1985) finding that the significance of fit varied across different types of churches. Assuming that different churches attract correspondingly different kinds of people, this finding is in line with Edwards and Rothbard's (1999) report that the effects of fit vary according to level of needs and supplies.

Second, we too were faced with one of the oldest and still unsolved problems of P–E fit research, the measurement of needs and supplies (e.g. French et al., 1974; Edwards et al., 1998). The correlations between the supplies and some of the well-being measures suggest that supply items already contained a certain amount of individual fit. It may be more appropriate to find ways to assess needs and supplies in absolute instead of relative quantities. Moreover, highly religious members of NRMs may tend to adjust ratings for needs and supplies to avoid cognitive dissonance (Festinger, 1957). Such dissonance may arise when they become aware that the supplies offered by the religious group that plays a central role in their lives are not in line with their own basic personal needs. Accordingly, the questionnaire should be split into two parts, one for needs and one for supplies, that can be administered independently of each other.

A third limitation stems from the cross-sectional design of our study, which does not permit inferences about causality, although the theoretical framework, P–E fit theory, suggests that the interaction between needs and supplies affects well-being. Longitudinal studies would be necessary to investigate this point. They would also be interesting with regard to the development of fit in the course of membership. While fit may grow for some individuals as a result of increased adjustment to the group, it may decline for others whose needs were only temporarily in accord with the supplies of the NRM. It can be assumed that the latter group of persons will leave the NRM when the discordancy becomes too large.

In spite of these limitations, the findings from the current study are both interpretable and highly suggestive. Regarding the question of whether joining an NRM is generally detrimental to well-being, our data indicate that there is no simple "yes" or "no" answer. It seems, rather, to be a matter of the fit between an individual's needs and the supplies of the specific religious group chosen; well-being, accordingly, seems to vary from member to member.

Our findings, in sum, underscore the value of applying P–E fit theory to questions regarding the psychosocial consequences of membership in NRMs—and therewith also to the study of membership processes in other religious traditions, processes that may be assumed to follow similar basic patterns. Further studies are nonetheless needed to address the limitations mentioned above and to clarify the ambiguous results of this study. Samples

varying in terms of religious affiliation, length of contact or membership, and centrality of religion should be explored, and additional needs–supplies dimensions studied, in order to achieve a better understanding of potential domain-specific conditions and processes. These are interesting not only from a theoretical or methodological point of view, but also for their practical implications for counseling members and ex-members of NRMs as well as their relatives (Busch & Poweleit, 2004). By continuing research in this context, psychologists studying the effects of participation in NRMs and in religious organisations in general can profit from the richness of P–E fit research at the same time that P–E fit theory can be advanced by application to a new domain. We hope that other scholars will be inspired by our findings to take up this line of research and explore it further.

REFERENCES

Bakan, D. (1966). *The duality of human existence: An essay on psychology and religion*. Chicago, IL: Rand McNally.

Becker, P. (1989). *Der Trierer Persönlichkeitsfragebogen (TPF)* [The Trier Personality Inventory (TPI)]. Göttingen: Hogrefe.

Busch, H., & Poweleit, D. (2004). Seelisches Gleichgewicht und weltanschauliche Konversion: Das Modell der Relativen Psychischen Balance (RPB) in der weltanschaulichen Beratung [Mental balance and worldview conversion: The model of Relative Mental Balance (RMB) in worldview counseling]. In F.-C. Schubert & H. Busch (Eds.), *Lebensorientierung und Beratung: Sinnfindung und weltanschauliche Orientierungskonflikte in der (Post-)Moderne* (pp. 215–245). Mönchengladbach: Hochschule Niederrhein, Fachbereich Sozialwesen.

Chryssides, G.D. (1999). *Exploring new religions*. London: Cassell.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd edn.). Hillsdale, NJ: Erlbaum.

Dawson, L.L. (1998). *Comprehending cults: The sociology of new religious movements*. Toronto: Oxford University Press Canada.

Deci, E.L., & Ryan, R.M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.

Deci, E.L., & Ryan, R.M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*, 227–268.

Deutscher Bundestag Referat Öffentlichkeitsarbeit (Ed.). (1998). *Final Report of the Enquete Commission on "So-called Sects and Psychogroups": New religious and ideological communities and psychogroups in the Federal Republic of Germany* (W. Fehlberg & M. Ulloa-Fehlberg, trans.). Bonn: Deutscher Bundestag, Referat Öffentlichkeitsarbeit.

Edwards, J.R. (1994). The study of congruence in organizational behavior research: Critique and a proposed alternative. *Organizational Behavior and Human Decision Processes*, *58*, 51–100.

Edwards, J.R. (2002). Alternatives to difference scores: Polynomial regression analysis and response surface methodology. In F. Drasgow & N.W. Schmitt

(Eds.), *Advances in measurement and data analysis* (pp. 350–400). San Francisco, CA: Jossey-Bass.

Edwards, J.R., Caplan, R.D., & Harrison, V.R. (1998). Person–environment fit theory: Conceptual foundations, empirical evidence, and directions for future research. In C.L. Cooper (Ed.), *Theories of organizational stress* (pp. 28–67). Oxford: Oxford University Press.

Edwards, J.R., & Parry, M.E. (1993). On the use of polynomial regression equations as an alternative to difference scores in organizational research. *Academy of Management Journal*, *36*, 1577–1613.

Edwards, J.R., & Rothbard, N.P. (1999). Work and family stress and well-being: An examination of person–environment fit in the work and family domains. *Organizational Behavior and Human Decision Processes*, *77*, 85–129.

Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.

French, J.R.P., Rodgers, W., & Cobb, S. (1974). Adjustment as person–environment fit. In G.V. Coelho, D.A. Hamburg, & J.E. Adams (Eds.), *Coping and adaptation* (pp. 316–333). New York: Basic Books.

Fürntratt, E. (1969). Zur Bestimmung der Anzahl interpretierbarer gemeinsamer Faktoren in Faktorenanalysen psychologischer Daten [Determining the number of interpretable common factors in factor analyses of psychological data]. *Diagnostica*, *15*, 62–75.

Galanter, M. (1989). *Cults: Faith, healing, and coercion*. New York: Oxford University Press.

Guisinger, S., & Blatt, S.J. (1994). Individuality and relatedness: Evolution of a fundamental dialectic. *American Psychologist*, *49*, 104–111.

Harrison, R.V. (1985). The person–environment fit model and the study of job stress. In T.A. Beehr & R.S. Bhagat (Eds.), *Human stress and cognition in organizations: An integrated perspective* (pp. 23–55). New York: Wiley & Sons.

Herrmann, C., Buss, U., & Snaith, R.P. (1995). *HADS-D–Hospital Anxiety and Depression Scale—Deutsche Version* [HADS-D—German version]. Bern: Huber.

Huber, S. (2003). *Zentralität und Inhalt: Ein neues multidimensionales Messmodell der Religiosität* [Centrality and contents: A new multidimensional measurement model of religiosity]. Opladen: Leske + Budrich.

Huber, S. (2007). Are religious beliefs relevant in daily life? In H. Streib (Ed.), *Religion inside and outside traditional institutions* (pp. 211–230). Leiden, The Netherlands: Brill.

Jacobs, J.L. (1989). *Divine disenchantment: Deconverting from new religions*. Bloomington, IN: Indiana University Press.

Kristof, A.L. (1996). Person–organization fit: An integrative review of its conceptualizations, measurement, and implications. *Personnel Psychology*, *49*, 1–49.

Kristof-Brown, A., Barrick, M.R., & Stevens, C.K. (2005). When opposites attract: A multi-sample demonstration of complementary person–team fit on extraversion. *Journal of Personality*, *73*, 935–958.

Lilliston, L., & Shepherd, G. (1999). New religious movements and mental health. In B. Wilson & J. Cresswell (Eds.), *New religious movements: Challenge and response* (pp. 123–139). London: Routledge.

Melton, J.G. (2004). Toward a definition of "new religion". *Nova Religio*, *8*(1), 73–87.

Murken, S., Müller, C., Huber, S., Rüddel, H., & Körber, J. (2004). The role of religion for coping with breast cancer. *International Journal of Behavioral Medicine*, *11*(Supplement), 332.

Pargament, K.I., Johnson, S.M., Echemendia, R.J., & Silverman, W.H. (1985). The limits of fit: Examining the implications of person–environment congruence within different religious settings. *Journal of Community Psychology*, *13*, 20–30.

Pargament, K.I., Tarakeshwar, N., Ellison, C.G., & Wulff, K.M. (2001). Religious coping among the religious: The relationships between religious coping and well-being in a national sample of Presbyterian clergy, elders, and members. *Journal for the Scientific Study of Religion*, *40*, 497–513.

Pargament, K.I., Tyler, F.B., & Steele, R.E. (1979). Is fit it? The relationship between church/synagogue member fit and the psychosocial competence of the member. *Journal of Community Psychology*, *7*, 243–252.

Poling, T.H., & Kenney, J.F. (1986). *The Hare Krishna character type: A study of the sensate personality*. Lewiston, NY: Mellen.

Richardson, J.T. (1995). Clinical and personality assessment of participants in new religions. *International Journal for the Psychology of Religion*, *5*, 145–170.

Robbins, T., & Lucas, P.C. (Eds.) (2001). New religions in their political, legal, and religious contexts around the world [Special issue]. *Nova Religio*, *4*(2).

Ryan, R.M. (1991). The nature of the self in autonomy and relatedness. In J. Strauss & G.R. Goethals (Eds.), *The self: Interdisciplinary approaches* (pp. 208–238). New York: Springer.

Schneider, B. (2001). Fits about fit. *Applied Psychology: An International Review*, *50*, 141–152.

Schütz, A. (2000). *Psychologie des Selbstwertgefühls: Von Selbstakzeptanz bis Arroganz* [The psychology of self-esteem: From self-acceptance to arrogance]. Stuttgart: Kohlhammer.

Sundberg, N.D., Latkin, C.A., Littman, R.A., & Hagan, R.A. (1990). Personality in a religious commune: CPIs in Rajneeshpuram. *Journal of Personality Assessment*, *55*, 7–17.

Taris, R., & Feij, J.A. (2001). Longitudinal examination of the relationship between supplies–values fit and work outcomes. *Applied Psychology: An International Review*, *50*, 52–80.

Tinsley, H.E.A. (2000). The congruence myth: An analysis of the efficacy of the person–environment fit model. *Journal of Vocational Behavior*, *56*, 147–179.

Verquer, M.L., Beehr, T.A., & Wagner, S.H. (2003). A meta-analysis of relations between person–organization fit and work attitudes. *Journal of Vocational Behavior*, *63*, 473–489.

Westphal, K. (2002). *Ursachen des Ausstiegs aus religiös-fundamentalistischen Gruppierungen: Eine qualitative Untersuchung* [Reasons for leaving religious-fundamentalistic groups: A qualitative study]. Jena: IKS Garamond.

Wohlfahrtssurvey (1998). *Fragebogen vom 12.10.1998* [Welfare survey (1998). Questionnaire of 10/12/1998]. Berlin: Abteilung Sozialstruktur und Sozialberichterstattung, Wissenschaftszentrum Berlin für Sozialforschung (WZB).

APPENDIX

Rotated Component Matrix[a] and Communalities from the Factor Analysis

	Analysis 1: Needs			Analysis 2: Supplies		
	Component			Component		
Item	1	2	Communality	1	2	Communality
1. Having the opportunity to go and/or find one's own way to God within the faith community.	.06	**.83**	.70	.26	**.80**	.71
2. Having the opportunity to decide for oneself how to lead one's religious life within the context of the faith community.	.00	**.86**	.74	−.01	**.92**	.85
3. Feeling welcome and integrated in the faith community.	**.80**	−.06	.64	**.90**	.03	.81
4. Feeling very close and connected to sisters and brothers in the faith.	**.85**	.06	.73	**.87**	.13	.78
5. Experiencing oneself as valuable in the faith community.	**.84**	−.09	.72	**.60**	.52	.63
6. Feeling appreciated in the faith community just as one is.	**.70**	.37	.63	**.61**	.50	.62
7. Being able to successfully integrate one's abilities and competences into the faith community and its practices.	.54	.44	.48	.51	.49	.50
8. Experiencing one's personal efforts on the path of faith as successful.	.58	.33	.45	.50	.44	.44

Note: Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalisation. Bold print indicates factor loadings $a \geq .60$.
[a] Rotation converged in 3 iterations.