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Social Diffusion of Religious Values within Families

Conceptual and Methodological Considerations

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Abstract

Family members create for each other the social context in which family behavior and personality development take place. The importance of social influence in families is evidenced empirically by family members' great similarity on a wide variety of characteristics. Focusing on intrafamily convergence on religiosity, the study discuses empirical methods of dyadic analysis and illustrates their use with an analysis of horizontal intracouple alignment and vertical intergenerational transmission. In addition to the finding that experiences during religious socialization in the parental home have a stronger impact than partner influences in adulthood, the analyses show that social context effects are stronger when the interaction dyad is more cohesive, as measured by, for example, relationship quality.

Keywords: Intergenerational Transmission, Homogamy, Religion, Dyadic Analysis, Socialization, Social Context

Zusammenfassung

Familienmitglieder repräsentieren füreinander jeweils gegenseitig den sozialen Kontext, innerhalb dessen sich familiales Handeln und individuelle Persönlichkeitsentwicklung abspielen. Soziale Einflüsse in Familien äußern sich empirisch in einer überzufälligen Ähnlichkeit der Familienmitglieder hinsichtlich einer großen Bandbreite von Merkmalen. Der vorliegende Beitrag fokussiert auf die intrafamiliale Homogenisierung hinsichtlich Religiosität, wobei in einem empirischen Datenbeispiel horizontale Paar-Angleichungsprozesse sowie vertikale intergenerationale Transmissionsprozesse untersucht werden. Neben dem Befund, dass Sozialisationserfahrungen im Elternhaus bedeutsamer sind als spätere Partnereinflüsse, zeigen die Analysen, dass soziale Kontexteffekte umso stärker ausfallen, je größer die Kohäsion in der jeweiligen Interaktionsdyade ist; hier operationalisiert über die Beziehungsqualität.

Schlüsselwörter: Intergenerationale Transmission; Homogamie; Religion; Dyadische Datenanalyse; Sozialisation; sozialer Kontext

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1 Theoretical Background and Introduction to the Problem[1]

At the very heart of sociology is the analysis of social action (Esser, 1996). In Weber's formulation (1972), social action is action in social contexts, characterized as any action that is undertaken in reference to the behavior of other persons. This social reference can arise in two ways. First, in co-orientation, actors are oriented to each other in their actions because they compare themselves to each other. Second, in social interdependence, actors are oriented to each other because each has a resource needed by the other (Esser 2000a; Meulemann 2012).

These two basic social configurations – co-orientation and interdependence – are relevant also for action within families. Indeed, they are associated with the following fundamental production and reproduction functions of the family (vgl. Nave-Herz, 2013). The intra-family division of labor, in which each member is assigned a specific role, helps guarantee the production of important basic goods (so called "commodities", cf. Becker, 1981); and the family as a network of expressive social relationships ensures the transmission of values as well as the mental and physical reproduction of subsequent generations. These two aspects of family functioning, which incidentally correspond to the basic sociological concepts of functional (role) differentiation and cultural integration/differentiation (Esser, 2000), equip families and their members with different sets of resources and cultural characteristics. And as they do, mutually opposing forces are at work: A division of labor and functional differentiation imply dissimilarities among individuals (for example in terms of market-relevant human capital), but socialization processes occurring among and between generations imply similarities (for example in terms of personal values). The processes are similar in that they both result in a (stochastic) dependency, expressed as a negative correlation of the characteristics of family members in the case of functional differentiation and as a positive correlation in the case of socialization. Noteworthy here is Gary Becker's distinction between complementary and substitutable characteristics (Becker, 1993). In the present study, we focus on the family's socialization function, but the method described below can be applied equally to processes of specialization.

The emergence of similarities within families can be attributed generally to the two processes of selection and socialization (cf. Arránz Becker and Lois, 2010: 1234-1248). Selection involves the active choice of contexts, based among other things on the criteria of similarity (examples here are partner selection or partner separation in case of a mismatch). Socialization processes refer to the increasing similarity of group members over time. It implies specifically that, over time and via personal interaction, family member adapt one another's values and attitudes. Each family member can be conceptualized as

[1] This is a slightly revised version of a German paper, which was published 2014 in Kölner Zeitschrift für Soziologie und Sozialpsychologie 66: 417-444 (DOI: 10.1007/s11577-014-0267-4).

a part of the others' social context, exercising more or less influence, and the extent of this influence can be statistically modeled using appropriate methods. In the analysis below, "socialization" is conceptualized, following the Anglo-American tradition of family sociology (e.g. Oppenheimer, 1988: 563-591), not only to mean primary socialization and enculturation as the internalization of values and norms in childhood but also to include value-adaptation within the same generation, as occurs between couples.Sociologists of the family paid little attention to the effects of social context on family behavior until the 1990s, and although theorists have long earmarked these factors as worthy of more intense research, the influence of partner and family member characteristics has only recently been included in analyses of social behavior (Thompson and Walker, 1982: 889 - 900). Although it came late, the paradigm shift to dyadic relations has now arrived, evident in the increasing interest in partner characteristics (Corijn *et al.*, 1996: 117-126) and in methodological developments (Gonzalez and Griffin, 1997: 271 - 301, Kenny, 1988: 57 - 77). Still, its late onset is surprising given that theoretical approaches such as social exchange theory (Nye, 1982) and Becker's (Becker, 1981) economics of the family had always employed dyads or family households as their basic unit of analysis.

The present study has two goals. With a focus on religiosity, its substantial concern is intra-familial diffusion of value systems. Religiosity is a fundamental value dimension that, even in modern societies, is closely tied to family transitions such as marriage and family formation (Lois, 2009). Its methodological goal is to demonstrate the use of new techniques to model social influences within dyads and families. In the section below, the analysis begins with a review of the still relatively diminutive body of literature covering processes of mutual adoption of religiosity within families. The subsequent section deals with recent innovations in statistical methods for modeling context effects among pairs and within families. The analysis then applies these methods to estimate intergenerational and partner influences in the transmission of religiosity. The paper ends with a review of key findings, a discussion of the still untapped potential of this kind of analysis to extend our knowledge of family dynamics, and suggestions for the next steps in research.

2 State of Current Research

The following literature review summarizes the state of current research on how family context influences the emergence of value systems and lifestyles generally and religiosity specifically. Transmission between generations is addressed first, followed by mutual adaptation within partnerships.

2.1 Intergenerational Transmission

The term "intergenerational transmission" refers primarily to the cultural transfer of parents' characteristics by their children (Martin-Matthews and Kobayashi, 2002: 922-927).

However, in response to modern demographic changes, especially increased average life-expectancy, research on the vertical transmission of attitudes, values, and behaviors within families has begun to include also grandparents and their grandchildren (Copen and Silverstein, 2007: 497-510). Empirical measurement of the effects of intergenerational transmission processes is usually undertaken by observing similarities among the members of different generations on a given variable of interest.

The rich literature on intergenerational transmission differentiates between three broad areas of social transmission (Fend, 2009: 81-103). First, work in general sociology and in the sociology of education and parenting has focused mainly on the transmission of parents' socioeconomic status to their children, especially on the intergenerational transmission of educational and employment status (Brake and Büchner, 2003: 618-638, Fend, 2009: 81-103, Rössel and Beckert-Zieglschmid, 2002: 457-513). Familial reproduction of cultural capital in migrant families (Steinbach and Nauck, 2004: 20-32) is also a major topic in this literature. A second area of social transmission involves the intergenerational transmission of various behaviors such as volunteering (Bekkers, 2007: 99-104, Mustillo *et al.*, 2004: 530-541) or the use of violence (Uslucan and Fuhrer, 2009: 391-418). This tradition includes a broad empirical literature on the similarities between parents and their adult children in partnership and family behaviors, including for example marriage and partnership quality (Erzinger, 2009: 245-265, Perren *et al.*, 2005: 441-459, Yu and Adler-Baeder, 2007: 87-102), parenting styles (Chen *et al.*, 2008: 1574-1599), divorce (Berger, 2009: 267-303, Dronkers and Harkonen, 2008: 273-288, Teachman, 2002: 717-729), and the timing of family transitions in the sense of, for example, age at marriage or first birth (Steenhof and Liefbroer, 2008: 69-84, Van Poppel *et al.*, 2008: 7-22). The third major area involves the intergenerational transmission of attitudes and value orientations. Major issues in this tradition are gender-role attitudes (Moen *et al.*, 1997: 281-293) and the transmission of achievement orientations from parents to their children (Baier and Hadjar, 2004: 156-177). Political and religious orientations, too, have been the focus of much empirical work (Bengtson *et al.*, 2009: 325-345, Fend, 2009: 81-103, Grob, 2009: 329-372).

Below, the focus narrows to studies of the intergenerational transmission of cultural values and religiosity specifically, in order to elucidate the theoretical background relevant for this study's empirical analysis. Cultural transfer of values in families is of particular interest because it encompasses important determinants of individual biographical decisions and, thus, is relevant for the structuring of individual biographies. Not only that, it also determines the strength of cultural traditions in society at large (Schönpflug, 2001: 174-185, Trommsdorff, 2009: 126-160). The review below starts with a look at existing theoretical understandings of how cultural transmission works and then highlights specific empirical results.

Theoretical approaches attach great importance to families as a context of development in childhood socialization, alongside peers and educational institutions, focusing especially on the situations of family life and parental commitment (Kraul and Radicke, 2012: 137-161, Roest *et al.*, 2009: 146-155, Vollebergh *et al.*, 2001: 1185-1198). The relevance of families and of parents in the family context for the creation of "transmission belts" (Schönpflug, 2001: 174-185) stems from the fact that cultural transmission, in contrast to genetic transmission, requires social learning (Bandura, 1976). Until children begin to exercise autonomy over their daily lives in adulthood, their parents usually function as their most important role models for processes of social learning and imitation because most parents and non-adult children live in a common household, communicating and interacting with one another on a routine basis (Schönpflug, 2001: 174-185). This intergenerational connection does not end when the children move out; indeed, children and parents are usually connected their entire lives.

The principle of "linked lives" (Elder, 1994: 4-15), meaning that individuals are embedded in social relations over the entire lifespan, applies to the parent-child relationship more than to any other social relation. For this reason, the relationship connecting parents and children be observed across the entire life course with a sensibility to the ways in which individual biographical stages interact with developments in the social context over time (Bengtson *et al.*, 2002). In an "ecocultural model of intergenerational relations", all of these elements are pulled together. It describes the process, the direction, and the result of cultural transmission as "the *persons* (*agents*) who are involved in the transmission process, their respective *relationships*, the *issue* (*contents*) that are transmitted, and the *cultural context* in which transmission takes place" (Trommsdorff, 2009: 126-160). For empirical studies of intergenerational transmission based on such complex models, the demands on data quality are correspondingly high (Baier and Hadjar, 2004: 156-177). Ideally, intergenerational datasets should contain information independently sampled from multiple generations and at different points in time. For the most part, the empirical studies of the intergenerational transmission of religious values, reviewed below, fulfill this high standard.

Empirical work repeatedly demonstrates that the intergenerational transmission of religious and church orientations is remarkably successful and that it is also relatively successful in comparison to other cultural orientations such as political attitudes or musical interests and abilities (Bengtson, Copen, Putney and Silverstein, 2009: 325-345, Zinnecker and Hasenberg, 1999: 445-457). The very high level of intergenerational inheritance of religious practices and beliefs is empirically confirmed (Bao *et al.*, 1999: 362-374, Domsgen, 2008, Fend, 2009: 81-103, Pearce and Thornton, 2007: 1227-1243, Zinnecker, 1998: 343-356). Short-term transmission (parents/adolescents) and long-term transmission (parents/adult children) have both been observed (Domsgen, 2008, Fend, 2009: 81-103, Myers, 1996: 858-866).

Many studies also confirm that parental gender and children's gender both play a role in the success of transmission processes. First, mothers are evidently more important than fathers for the cultural transfer of religion and religious beliefs (Bao, Whitebeck, Hoyt and Conger, 1999: 362-374, Zinnecker and Hasenberg, 1999: 445-457). This is attributed to the continued dominant role of mothers for the development of children's values, which in turn stems from their expressive role in familial socialization, the higher probability that they exercise psychological control, and their higher interaction density with offspring (Bao, Whitebeck, Hoyt and Conger, 1999: 362-374). Second, the acquisition of religious beliefs is apparently stronger among daughters than sons (Fend, 2009: 81-103, Zinnecker, 1998: 343-356, Zinnecker and Hasenberg, 1999: 445-457).

Using a structural equation model and a sample of parents in which mothers and fathers were surveyed indepedently of each other, Zinnecker (1998: 343-356). showed that parents' religious interests and intentions were highly correlated. He concluded that parents create synergy effects in the religious education of their children in the sense that mothers' and fathers' values combine to an overarching parental construct of family religiosity, whereby religious similarity is interpreted as the result of processes of childhood development and mutual understanding (1998: 343-356).[2] Zinnecker also makes reference to another element of the "ecocultural model": the parents' own childhood experiences with religious and church education. What the mothers and fathers reported regarding their own religious education showed that their parents had very homogeneous religious socialization experiences, which presumably then played a role in partner selection. Zinnecker (1998: 343-356) calls this the "persistence of church and religious family milieus". Additional synergy effects can be expected because religiously active parents may choose culturally compatible institutions for their children (such as religious kindergartens), which supports the family's pattern of religious education, and because religious parents may restrict their social life to a religiously oriented social network and so expose their children to its influence (Pearce and Thornton, 2007: 1227-1243, siehe auch Wolf, 1995: 345-357). Of course, the parents of the parents – the grandparents of the children – also belong to such networks, and a longitudinal study of three generations showed that "parents and grandparents simultaneously serve as independent and joint agents of religious socialization" (Bengtson, Copen, Putney and Silverstein, 2009: 325-345). Here, as in other studies, female gender and developments in the social context over time are identified as having an important effect on the success of transmission.

Several empirical studies of parent-child transmission of religious practices and orientations conducted in the late 1980s and early 1990s showed, too, that high quality partner relations and good parent-child relationships (in early childhood, a family atmosphere plays an important role) contribute positively to the inheritance of religiosity (Dickie *et al.*, 1997: 25-43, Luft and Sorell, 1987: 53-68, Myers, 1996: 858-866). A later US study

[2] On the question of where similarities among partners come from, see the discussion below.

looked at the extent to which the perception of parental acceptance moderates intergenerational transmission of religious practices and beliefs (Bao, Whitebeck, Hoyt and Conger, 1999: 362-374), concluding that a supportive and understanding parenting style influences religious socialization in families positively.

In sum, intergenerational transmission of cultural values plays a special and highly interesting role within the process of socialization. On the micro-level, parents and grandparents quite evidently have a strong influence on children and grandchildren in preparing them for adult life through the development of specific world views. On the macro-level, this is the same process by which cultural traditions in society sustain themselves. However, the issue of the transfer of religiosity is especially fascinating in this context because decades-long empirical work has demonstrated that the intergenerational transmission of religiosity is very strong, even as the importance of religion and religiosity in modern societies is clearly sinking (see also Pickel, 2010: 447-484, Pickel, 2013: 59-94). One could speculate that this contradiction is explained in part by the effect, shown by Fend (2009: 81-103), that even when parents distance themselves from religion only minimally, it nonetheless has a big effect because it leads to their children staying completely away from religious institutions in adulthood. Presumably, the effect is also tied to the failure to follow religious practices. It must be said, however, that Fend looked only at church attendance, not religiosity generally. Given that ever fewer children are socialized to religion and, as a consequence, ever fewer religious partners are entering the marriage market, the question arises as to the extent to which partners align to one another in their religious orientation and beliefs within the partnership and what direction this convergence might take.

2.2 Alignment within Couples

As noted above, similarity in partnership can be attributed to selection and socialization effects (Kalmijn, 1998: 395-421). Selection effects arise through socially pre-structured opportunities for acquaintance ("assortative meeting") and the higher instability of dissimilar pairs ("assortative mating"). Socialization effects, in contrast, are understood as the convergence of partners such that homogamy emerges over the course of the partnership. Before looking at the relevant empirical findings on partner alignment, the review below first summarizes theoretical explanations for how selection effects occur. For the most part, these build on balance theory (Heider, 1958, Newcomb, 1953: 393-404), which operates under the assumption that human cognitions are organized harmoniously and that people avoid cognitive dissonance. For example, if an actor (A) and his partner (P) are mutually attracted, A and P are happy when they have similar attitudes, either positive or negative, about object X. If, however, the A-P-X triad becomes imbalanced because A and P differ in their affective valence toward X, negative mental reactions result. In this situation, A's negative reactions are stronger if A and P are strongly mutually attracted, if the object X is important for A, if A is highly committed to his stance

toward X, and if the object is highly salient for A and P's relationship (cf. Davis and Rusbult, 2001: 65-84).

If the A-P-X triad is out of kilter, there are several options for restoring the balance. Actor A can adjust his relationship to P, perhaps by reducing his attraction towards P or, in the extreme case, breaking off the relationship. Alternatively, A and P can try to ignore object X. The third option – and the most interesting option for this analysis – is mutual alignment, which occurs when A or P or both A and P change their attitude about X to make it more similar to their partner's attitude. Davis and Rusbult (2001) postulate that this third form of adjustment requires a relatively low degree of psychological effort, especially when the mutual attraction of A and P is strong.

The following review of the empirical research focuses on 1) the characteristics that have been observed to change as a result of mutual alignment, 2) what conditions influence the degree of mutual adaptation, and 3) what consequences mutual adaptation has for partnership survival. The number of relevant studies is small, which in turn may be attributable to the difficulty of acquiring appropriate pair-based data, which must be longitudinal and based on independent measurements for each partner. Except for one notable experimental study (Davis and Rusbult 2001), most current research employs survey data generated using the Actor-Partner Interdependence Model (APIM). In this model, mutual alignment is measured using a so-called partner effect. This indicates the extent to which the "idiosyncratic" part of the value of any given partner characteristic, measured in the previous survey wave, influences the value of the same characteristic of the *actor*, measured in the current wave. The "idiosyncratic" part of the partner's characteristic refers to the part of its value not explained by the value, measured in the same wave, of the same characteristic for the partner.

First of all, there certainly are indications that mutual alignment over time does occur for a wide array of characteristics. Thematically ordered, these characteristics include traditional gender-role orientations (Kalmijn, 2005: 521-535), attitudes regarding premarital sex (Caspi *et al.*, 1992: 281-291), attitudes related to political power (Caspi et al. 1992), socially critical stances such as rebelliousness against the current power establishment (Roest et al. 2006), religious values (Caspi et al. 1992), church attendance and denominational membership (Lois 2013), hedonistic values (Caspi et al. 1992), and a pair's shared free-time activities (Arránz Becker and Lois, 2010: 1234-1248). However, there is no basis to assume a universal tendency toward mutual adaptation, because no significant partner effects have been found for many other characteristics. These include rational-economic values, values related to marital fidelity, attitudes about daily interaction in the marriage, traditional family values, and values related to self-efficacy (Caspi et al. 1992; Roest et al. 2006).[3]

[3] In their finely differentiated analysis, Caspi et al. (1992) conclude that while partners do not become more similar (via adaptation) over time in their attitudes and values in some areas,

One must further differentiate between the mere existence of mutual alignment and the relative strength of adaptation effects. On this, Arránz Becker and Lois (2010) conclude that partner effects are significantly weaker in what they call a "high-culture action scheme" than in an "entertainment action scheme" (Schulze, 1992). The high-culture action scheme encompasses activities like painting, playing musical instruments, and going to the theater or opera. The entertainment action scheme refers to activities like going to sports events, seeing a movie, and clubbing. This divergence might stem from the fact that the participation in high-culture activities is relatively more education-dependent. Moreover, Lois (2013: 184-209) found indications that partner effects for church-going are much weaker than for forms of non-religious recreation like the entertainment activities mentioned above. This finding suggests that religious influences are more deeply embedded in individual biographies and more difficult to change. Early parental socialization may play a relatively more important role in forming religious influences than does adaptation to new socialization agents such as one's partner. The empirical analysis presented below in section four, investigates exactly this question.

Current research makes clear that the degree of adaptation depends also on additional moderating factors, independent of the specific characteristics in question, as seen in the research conducted in a laboratory setting by Davis and Rusbult (2001). They were able to confirm several elements of balance theory, showing that actors are more willing to mutually align on various attitude dimensions if they are in a partnership (in contrast to adaptation among "strangers"), if the quality of their partnership is high, if the object associated with the attitude is essential for the partner, and if attitudinal discrepancies toward the object are felt to be salient.

Some of these experimental results have been affirmed by survey-based studies. Roest et al. (2006: 1132-1146) replicated the finding that partner effects are generally stronger among spouses who express a high level of marriage satisfaction. Also, the extent to which the partnership is institutionalized is important: adaptation in recreational activities is more pronounced among married couples as compared to couples in non-marital unions, and it is also stronger among couples with longer as opposed to younger marriages (Arránz Becker and Lois 2010). Socio-structural homogamy also appears to promote adaptation. Roest et al. (2006) reported that partner effects are stronger in cases of homogamy in confession and education. Similarly, Arránz Becker and Lois (2010) show that mutual adaptation in high-culture activities is higher among partners whose educational background is more similar.

There is also empirical evidence in support of the proposition that partners adapt to one another more readily when the characteristic in question is highly salient either for their partnership generally or for their specific life phase. Lois (2013: 184-209) showed that

their initial similarity often persists over time through like-minded changes. The authors suggest that this could be the result of shared social conditions (a "common fate") or even genetic factors.

couples of divergent confession – say, for example, a Catholic man and a Protestant woman – are more likely to become homogamous in confession through religious conversion if they are a religiously active pair, married (for the first time), and have children five years or older in their household. Similar effects are in evidence for church-going frequency. Note, however, that confessionally heterogamous pairs who want a religion-sanctioned marriage may be forced to become homogamous by the strict endogamy rules of some religions. In this context, Musick and Wilson (1995: 257-270) show that in the run-up to marriage, persons convert to the religion of their future partner even when the religion is very dissimilar culturally to their previous confession. Having school-aged children probably also encourages mutual adaptation, as issues of consistent religious socialization become more urgent when children reach that age. Regarding harmonization in recreational activities, Arránz Becker and Lois (2010) found that entering employment or starting a family, which encourage specialization in the use of time resources, has a retarding effect, whereas the transition to the "empty nest", which encourages harmonization of time use, has a favorable effect. Finally, Kalmijn (2005), showed that on gender-role orientation, men adapt to women more readily *after* family formation has already occurred. This apparently paradoxical finding is probably explained by the fact that gender-role orientation is closely tied to the division of labor with the partner, which tends to become more traditional in the course of family formation.

For adaptation of religious confession specifically, there is also evidence of a period effect in the sense of a general secularization trend. Lois (2013: 189-209) found that the inclination to adapt through conversion has dwindled historically, confirming other studies showing a long-term increase in the share of multi-confessional marriages (Hendrickx *et al.*, 1994: 619-645, Klein and Wunder, 1996: 96-125).

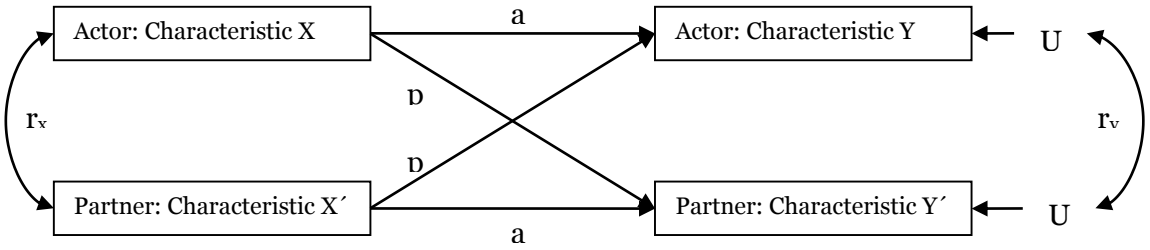
A further question has to do with the consequences of mutual adaptation for the longevity of partnerships. Can adaptation to the spouse or life partner be interpreted as a kind of investment in the partnership that "immunizes" against separation? The available evidence supports this hypothesis. Arránz Becker and Lois (2010) found that the risk of separation was reduced not only by a time-constant similarity of preferences in recreational activities (representing similarities that existed already at the partners' first contact) but also by similarities that emerged through mutual adaptation over time. Findings reported by Lehrer and Chiswick (1993: 385-399) and Lois (2013: 189-209) for confession and church-going frequency were similar. Lehrer and Chiswick (1993: 385-399) distinguish, for example, between pairs who belonged to the same religious community already at the start of their marriage and pairs who became homogamous later through conversion. Among homogamous Protestant married couples, they found that marriages that were homogamous by conversion were more stable than marriages that were homogamous to begin with. This effect, however, did not emerge with other religious communities, such as among Catholic pairs.

3 New Methodological Approaches for Investigating the Influences of Familial Context

Empirical analyses of pair or family characteristics (so called between variables, cf. Kenny *et al.*, 2006), which also include by definition such events as transitions in the family cycle, require only (a) the availability of information on the same characteristics of all potentially relevant family members and (b) their inclusion in the regression equation as additional covariates. They do not require specialized methods of analysis. Methodologically, it becomes more interesting and challenging whenever individually variable characteristics (so-called *mixed variables*) are the object of explanation. In this case, the standard assumption of statistical analysis that each observation is independent of all the others is compromised due to the clustering of the individuals in pairs or families. A simple way to resolve this problem is to adjust the standard error, which is systematically underestimated if the persons within the clusters are unusually similar to one another (Kenny, 1995: 67-75). However, this strategy is suboptimal because it treats dependency in the data merely as a form of statistical annoyance, ignoring the possibility of using it to model social interdependence.

Social interdependence is more appropriately modeled using techniques that permit specification of contextual influences in dyads or families using co-called *partner effects*. Early discussions of such techniques focused on methods that were relatively complicated because they required manual calculation on the basis of bivariate correlations (Gonzalez and Griffin, 1999: 449-469, Neyer, 1998: 291 - 306). The past ten years, however, have brought much innovation in the methods of multivariate dyadic analysis. Incidentally, despite the appellation, dyadic analysis is not limited to dyads but can be applied to small groups, too (Kenny, Kashy and Cook, 2006). Among the new approaches, the Actor-Partner Interdependence Model (APIM) has emerged as an important international standard (Cook and Kenny, 2005: 101-109). Characteristic for the APIM is that it defines each position-holder in a social structure as simultaneously sender and receiver of social influence (Figure 1). The APIM differentiates further between two kinds of effects: actor effects (a) and partner effects (p). Actor effects refer to the association between characteristic X and characteristic Y in the same individual. Partner effects refer to the association between characteristic X of one individual and characteristic Y of another individual in the same dyad or group. Both effects are estimated controlling for the extent of similarity among dyad members (r_x). The residual similarity on characteristic Y is estimated via r_y as the correlation of the residuals U and U´, after controlling for characteristic X of both individuals.

Figure 1: Actor-Partner Interdependence Model (APIM) for Non-Distinguishable Dyads



In principle, Actor-Partner Interdependence Models can be estimated either as multi-level or structural equation models with very similar results (Kenny, Kashy and Cook, 2006). In the analysis below, we use a two-level random intercept specification. Due to the fact that simple regression techniques allow only for the analysis of one dependent variable at a time, coding variables from both partners requires "stacking" them within the same (actor) variable. Furthermore, for the calculation of partner effects (which here represent the underlying social influences), the values of the respective partner are coded in a (partner) variable. An additional dummy status variable (S) indicates the actor's person type (for example, spouse's gender or generation status). With dyads, this procedure registers each individual in the dataset once as actor and once as partner and thus produces a so-called "pairwise format" with pairwise cross-linked actor and partner characteristics. In longitudinal datasets, this coding scheme is repeated for each wave (dataset in long-long format, see Table 1).

Table 1: Fictitious Pairwise Data Matrix for Dyadic Longitudinal Data (Long-Long Format)

Wave	Pair ID	Partner ID (S)	Ya	Yp	Xa	Xp
1	1	1	5	2	3	1
1	1	2	2	5	1	3
2	1	1	4	2	5	2
2	1	2	2	4	2	5
3	1	1	4	3	4	2
3	1	2	3	4	2	4
1	2	1	2	4	2	5
1	2	2	4	2	5	2

The simple dyadic formulation of the APIM yields the following two-level regression equation (with pair index i, here without additional covariates for the sake of simplicity):

Level 1 (Persons):

$$Y_a = \beta_{0i} + \beta_1 X_a + \beta_2 X_p + \left[+\beta_3 S + \beta_4 X_a \cdot S + \beta_5 X_p \cdot S\right] + U \quad (1)$$

Level 2 (Pair/Family):

$$\beta_{0i} = \gamma_0 + U_i \quad (2)$$

β_1 is the *actor effect* of characteristic X on characteristic Y, within individuals; β_2 is the *partner effect* of an individual's characteristic X on the partner's characteristic Y, controlling for the value of X for the partner. The case in which X is a chronologically antecedent measurement[4] of the dependent variable Y is described as a "cross-lagged" or "dynamic panel" model (Engel and Reinecke, 1996). The partner effect then indicates the degree of adaptation of one partner to the (residual) change of the other partner. If the persons can be meaningfully distinguished within the dyads (for example by gender for heterosexual couples), actor and partner effects for each individual can be estimated separately (of men on women and vice-versa for a total of four quantities) by multiplying the actor and partner effect by the status variables (see brackets in equation 1). In this case, the respective main effect β_1 (β_2) quantifies the actor effect (partner effect) in the reference category S of the status variables (e.g. among men); the non-standardized regression weight of the interaction effect indicates the numeric effect difference between the two groups indexed by S (e.g. men versus women). In principle, this approach is generalizable to more than two persons per group (see for an empirical example: Roest, Dubas and Gerris, 2009: 146-155), but its results quickly become difficult to interpret as more persons are added. The approach is therefore not well suited for the study of larger social structures such as networks or groups – such as school classes or business enterprises – that vary widely in size. However, when applied to pairs or families, both of which are typically characterized by clearly distinguishable roles or positions and by small to moderate size, it generates a highly differentiated and meaningfully interpretable analysis of the structures of social interdependence.

For the present study's purposes, of greatest relevance are partner effects, because they can be used in a longitudinal model to estimate mutual alignment within dyads over time. Should it become evident in the course of the analysis that additional social conditions favor or retard alignment, interaction effects between these conditions and partner or actor effects will be specified. An example follows.

4 Empirical Application: The Influence of Familial Context on Religiosity

4.1 Dataset, Methods of Analysis, and Operationalization

In order to demonstrate empirically what family context means for individual religiosity, we employ data from the Bamberg Panel of Married Couples and the Bamberg Non-Marital Partnerships Panel. The BEP is a long-term, five-wave survey centered on family and

4 In our empirical example we employ data from two waves such that – due to modeling on the basis of time-lagged covariates – only one observation per person, without clustering on time points, is available. In longitudinal analysis over more than two waves (see Table 1), modeling becomes much more complicated. One modeling option for this case is the so-called two-intercept model (Kenny, Kashy and Cook, 2006).

relationship developments (Rost *et al.*, 2003). It was conducted in the German federal states of Bavaria, Hesse, and Lower Saxony in the years 1988, 1990, 1992, 1994 and 2002. The NEL panel was conducted in Bavaria from 1988 through 1994, parallel to the BEP (Vaskovics and Rupp, 2009, Vaskovics *et al.*, 1997). The first wave of the panel of married couples included 1528 childless pairs in which the female partner was 35 years or younger. In its first wave, the non-marital partnerships panel surveyed 900 non-married pairs who had lived together in the same dwelling for three months or longer prior to the interview and were still young enough for fertility processes to be relevant.

Both surveys were designed to focus primarily on the transition to the first child and to the first marriage, but they are very well suited to address the questions asked in this study. Not only do they allow for the construction of a reliable multi-item scale on individual religiosity, as explained below, they also contain all the additional information necessary for analyzing transmission and adaptation. Because in 95% of the cases both partners were surveyed independently from each other and repeatedly, the surveys generated dyadic longitudinal data from two measurement time points using identical operationalizations (waves 1988 and 1992 for marriages and waves 1988 and 1990 for non-marital unions). These suffice for analyzing partner alignment. The investigation of transmission processes is made possible because both partners were asked to provide information about religious socialization in their parents' households and about the characteristics of the intergenerational relationship at the time of the survey.

The first step of empirical analysis to look at how parents' religiosity is transmitted to children and under what conditions transmission effects are stable. This analysis employs pooled cross-sectional data from the first wave (1988) of the BEP and the NEL (n = 2307 pairs with valid values on the dependent variable and with at least one living parent).[5] The data are formatted "pairwise" (Table 1), which means that both partners of a pair are represented in the dataset as one actor. Modeling follows in the context of an APIM, which is estimated as a multi-level model (see chapter 3 and Kenny, Kashy and Cook, 2006). The two partner-specific lines on level 1 (partner ID in Table 1) are nested in dyads on level 2 (pair ID in Table 1); this makes it possible to model the partners' statistical dependence. The regression model predicts the religiosity of the actor as an effect of religious socialization stemming from the actor's parents (actor effect) and of the religious socialization stemming from the partner's parents (partner effect), as illustrated in Figure 2. Because the dyads are distinguishable (heterosexual pairs), gender-specific differences in actor and partner effects are also tested using an interaction term.

The following operationalizations hold:

The religiosity of the actor is measured with a one-factor, four-item scale. The items include the importance of religion and church (from 1 = "unimportant" to 4 = "especially important"), the influence of religious beliefs on the respondent's life (from 1 = "plays no

[5] Missing values among the dependent variables were imputed using an EM algorithm.

role at all" to 4 = "plays a big role"), church attachment (from 1 = "none at all" to 4 = "very strong") and church-going frequency (from 1 = "never" to 4 = "at least once per week"). Church-going frequency is transformed to the number of services attended yearly. All items are z-standardized and combined through a calculation of means. Cronbach's Alpha ranges between .78 and .89 depending on the time point of measurement.

Religious upbringing by the parents is measured by the following items. "My parents were very religious during my childhood" and "The religiosity of my parents played a big role for family life back then," Answer categories for both questions varied between 1 = "not true at all" and 5 = "completely true."

In order to explore variation in intergenerational transmission effects over the life course, the following moderators were factored in, each from the actor's perspective: age, contact frequency, and an overall assessment of the relationship to the parents (referred to below as intergenerational relationship quality). Contact frequency was measured using six answer categories ranging from 0 = "none at all" to 5 = "daily or almost daily." Relationship quality was measured using the question "How would you rate your current relationship to your parents?" with answer categories ranging from 1 = "rather poor" to 5 = "very good." The question was posed separately for the relationship to the mother and father respectively. These items correlated at r = .52 and were combined through a calculation of means.

The second step of empirical analysis focuses on partners' mutual alignment over time. The analysis draws on the 1391 pairs (60.3% of the original sample of wave 1) that had valid values on the dependent variable for the two relevant measurement time points (1988 and 1992 or 1988 and 1990). These data, too, are formatted pairwise and estimations are calculated in the framework of the multi-level model described above (level 1: partner; level 2: dyads). In order to model change over time, the religiosity of the actor at time point t (wave 1992 for spouses and 1990 for non-marital unions) is predicted by the actor's religiosity at time point t-1 (1988, actor effect) and by the partner's religiosity at time point t-1 (partner effect), as illustrated in Figure 3. Using time-delayed ("cross-lagged") dependent variables enables measurement of how stable the actor's religiosity is. The partner effect represents the "influence" of the partner – the extent to which the actor adapts over time to become more like the partner.

In addition to the religiosity scale described above and the actor's gender, the following moderator variables are considered:

In the first wave of the BEP and NEL panels, respondents were asked to indicate their confession from among five possibilities (Catholic, Protestant, other Christian, other non-Christian, no religious confession). About half of the respondents (52% of the women and 50% of the men) were Catholic, and 38% of the women and 35% of the men were Protestant. The share of those with no religious confession was 9% among the

women and 13% among the men. The dummy variable "confessional homogamy" applies to pairs and is positive when both partners indicate the same confession in terms of the available answer categories. An additional dummy variable is set up for "both partners no religious confession". The reference category is pairs with different religious confessions, including the case where only one partner has no religious confession. In wave one, 54% of the pairs were by this definition homogamous and 41% were heterogamous; in 5% of the cases, both partners indicated having no religious confession.

For each pair and respective time point t, dummy variables indicate whether the partnership is a non-marital union (0) or marriage (1) and whether family formation had already taken place.

Partnership satisfaction, measured from the actor's perspective at time point t-1, is captured by asking the respective respondent how happy overall they are with their marriage or partnership currently. Answer categories varied between 1 = "very unhappy" to 5 = "very happy."

4.2 Empirical Results: Religious Transmission and Adaptation

The correlation matrix in Table 2 gives an overview of the relations between actor, partner, and parent characteristics in the family context. The substantial correlations between parental religious socialization and actors' religiosity (r = .50 for marriages and r = .40 for non-marital unions) suggest relatively strong vertical transmission processes in keeping with the studies reviewed in section 2.1. The multivariate models below explore factors that may be responsible for stabilizing this influence of parental socialization during the life course.

The even higher correlation between actors and partners (r = .67 for marriages and r = .43 for non-marital unions) shows additionally that religiosity is quite clearly a complementary characteristic (a characteristic shared by the partners in a relationship) especially among married couples. This well-established finding can be explained in terms of socially pre-structured opportunities of acquaintance, the heightened instability of dissimilar pairs, or convergence as a kind of horizontal socialization. This third possibility is explored below using a longitudinal APIM.

Finally, there are clear but weaker correlations in religiosity, especially among spouses, between the actor (or the actor's parents) and the partner's parents. These connections possibly can be explained in terms of autonomous context effects such as socialization influences from the parents-in-law. Alternatively, it may be simply an "artifact" of partner choice in the sense that persons who experienced the same religious influences are more likely to begin partnerships and thus also to share similar religious upbringings in their respective parental households (Zinnecker 1998).

Table 2: Horizontal and Vertical Familial Context Influences on Religiosity (Correlation Matrix)

		Marriages		
	A	P	EA	EP
Religiosity Actor (A)	1			
Religiosity Partner (P)	.67	1		
Religious Socialization by Parents of Actor (PA)	.50	.34	1	
Religious Socialization by Parents of Partner (PP)	.34	.50	.27	1
		Non-Marital Unions		
Religiosity Actor (A)	1			
Religiosity Partner (P)	.43	1		
Religious Socialization by Parents of Actor (PA)	.40	.12	1	
Religious Socialization by Parents of Partner (PP)	.12	.40	.04	1
n (Persons)		4,674		
n (Pairs)		2,337		

Notes:
Source: Bamberg BEP and NEL panels (waves 1988, 1990/1992)
All correlations are significant at p < .05 with the exception of the correlation PP-PA among non-marital unions.

The APIM shown in Table 3 separates the influences of the actor's parents from the influences of the partner's parents; these are typically conflated in bivariate correlations. Vertical religious transmission is unequivocally confirmed. The relevant coefficient for the actor effect (b = .46) corresponds to the standardized effect because it is a z-standardized variable. The results confirm established findings, reviewed in section 2.1 (Bao, Whitebeck, Hoyt and Conger, 1999: 362-374, Fend, 2009: 81-103, Pearce and Thornton, 2007: 1227-1243, Zinnecker, 1998: 343-356), that the transmission of religiosity from parent to child is relatively strong.

Table 3: Conditional Influences of Parental Socialization on Religiosity among Marriages and Non-Marital Unions (APIM Model, b-coefficients with z-values in parentheses)

	Model			
	1	2	3	4
Actor and Partner Effects				
Religious Socialization of the Actor (Actor Effect)	.46** (26.4)	.45** (38.6)	.45** (38.3)	.45** (38.0)
Religious Socialization of the Partner (Partner Effect)	.18** (10.2)	.19** (15.8)	.19** (15.9)	.19** (15.8)
Moderators				
Actor Effect × Woman	-.03 (-1.0)			
Partner Effect × Woman	.02 (0.7)			
Actor Effect × Age Actor #		-.01** (-3.1)		
Actor Effect × Contact Frequency Actor#			.03** (3.9)	
Actor Effect × IGR-Relationship Quality Actor #				.05** (3.9)
Control Variables				
Woman	.02 (1.5)	.02 (1.2)	.02 (1.4)	.02 (1.5)
Age Actor #		-.03** (-10.5)		
Contact Frequency of the Actor #			.05** (4.8)	
IGR-Relationship Quality of the Actor #				.06** (4.6)
Intercept	.01 (0.7)	.01 (0.6)	.01 (0.7)	.01 (0.7)
Variance within Dyads	.34** (33.9)	.33** (33.9)	.34** (33.8)	.34** (33.8)
Variance between Dyads	.38** (22.3)	.36** (22.0)	.37** (22.1)	.37** (22.2)
n (Pairs)			2,307	
n (Observations)			4,614	

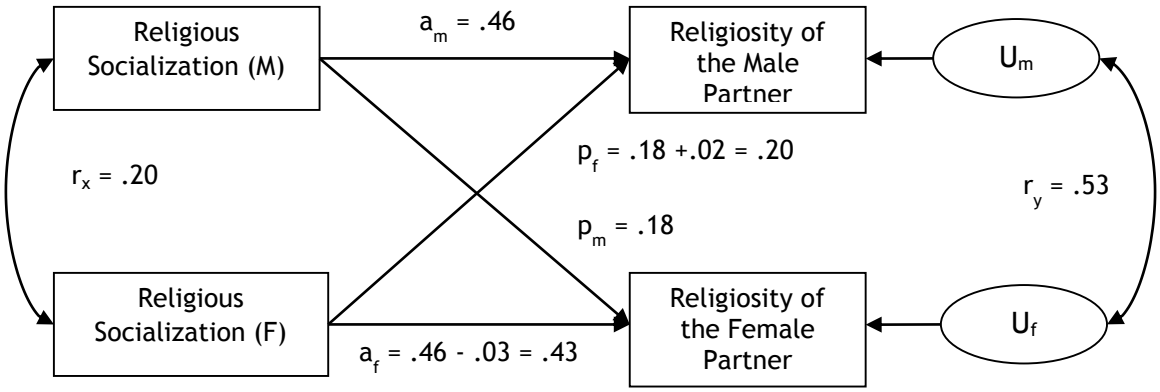
Notes:
Source: Bamberg BEP and NEL panels (wave 1988)
**** p ≤ .01; * p ≤ .05; + p ≤ .10**
 # = centered

In addition, there is a positive, if somewhat weaker association between the religiosity of the actor and the parental religious socialization of the partner (b = .18). The presence of this direct partner effect suggests that the partner's parents have an autonomous socialization influence on the actor in the sense of a church-religious family milieu (Zinnecker

1998), over and beyond the similarity of religious socialization of both partners that results from "assortative mating".

Figure 2 contains an illustration of the full APIM for distinguishable dyads, in this case by gender (Model 1 in Table 3). Here, the relationships discussed above, calculated for male actors only (b = .46 for the actor effect and b = .18 for the partner effect), are augmented with the actor and partner effects for female actors. The resulting main effects for female partners are calculated by summing up the main and interaction effects. For example, the actor effect for female actors corresponds to a value of b = .43 (actor effect for men plus negative interaction effect). However, the two insignificant interaction effects (b = -.03 and b = .02) in Model 1 demonstrate that actor gender plays no role in determining the strength of actor and partner effects.[6] Thus, these data do not confirm the finding that the assumption of religious beliefs is stronger for daughters than for sons (Bao, Whitebeck, Hoyt and Conger, 1999: 362-374). The residual correlation in religiosity between man and woman (r_y = .53) corresponds to the share of religiosity-related partner similarity that cannot be explained by the actor's own religious socialization experience in the parental household or by the influence of the partner's religious socialization.[7]

Figure 2: APIM for Distinguishable Dyads: Religious Transmission Processes in Partnerships



Notes:
Source: Bamberg BEP and NEL panels (Wave 1988)
Coefficients based on Table 3, Model 1

The remaining models (2-4) in Table 3 serve the purpose of identifying conditions under which vertical transmission of religiosity is strengthened or weakened. The significance

[6] For this reason, models 2-4 estimate combined (no gender reference) actor and partner effects.

[7] These correlations correspond to intra-class correlation and are calculated as the proportion holding between variance among dyads and total variance (.38 / (.34 + .38) = .53).

of the interaction effect "(actor effect) x (age)" in model 1 (b = -.01) demonstrates first of all that inheritance of religious attitudes apparently fades in importance with increasing age. This is in keeping with the well-established sociology of religion finding that religious orientations weaken during the transition from youth to adulthood, a transition also characterized by a break with the parental household (Lois, 2013).

The results also indicate that close intergenerational relations, characterized by emotional intimacy and frequent contact, make it more likely that the transmission of religious orientation will be long-lasting. If parents and their adult children see each other frequently (model 3) and if adult children assess the relationship to their parents as very good overall (model 4), actor effects are significantly stronger.[8] This finding affirms the US studies reviewed above (Bao et al. 1999; Myers 1996; Luft and Sorell 1987; Dickie et al. 1997).

The longitudinal models shown in Table 4 capture horizontal socialization via the partner, i. e. mutual alignment of partners over time. The actor effect in model 1 (b = .80) is again for men only and documents a high stability of religiosity across the two measurement time points. Among women, the actor effect is minimally but significantly weaker, as shown by the interaction term (b = -.06).

The significant partner effect (b = .07) is of special interest in the current context. It indicates that on religiosity, men aligned themselves to their female partners over time. At the second measurement time point (t), men had moved in the direction of the initial value of their female partners at time point t-1, adjusted for the men's own values at that point. In other words, men with strongly religious partners tended to become more religious, and men with weakly religious partners tended to become less religious. Nonetheless, this partner effect, which is to be interpreted as standardized, is relatively weak. This is in keeping with Lois' analyses (2013: 184-210) of church-going frequency and indicates that religiosity is deep-seated in individual identity and quite persistent. Note that women's alignment to their partners is no stronger, as shown by the insignificance of the interaction effect (b = .04), and for this reason, in models 2-4 again a combined partner effect is estimated.

[8] Regarding the interpretation of conditional main effects: Because a centering on the mean was undertaken, actor effects in models 2-4 refer respectively to the mean value of the moderator (age, contact frequency, relationship quality). The main effects of the moderator variables refer to the case in which actor religiosity is zero (i. e., average).

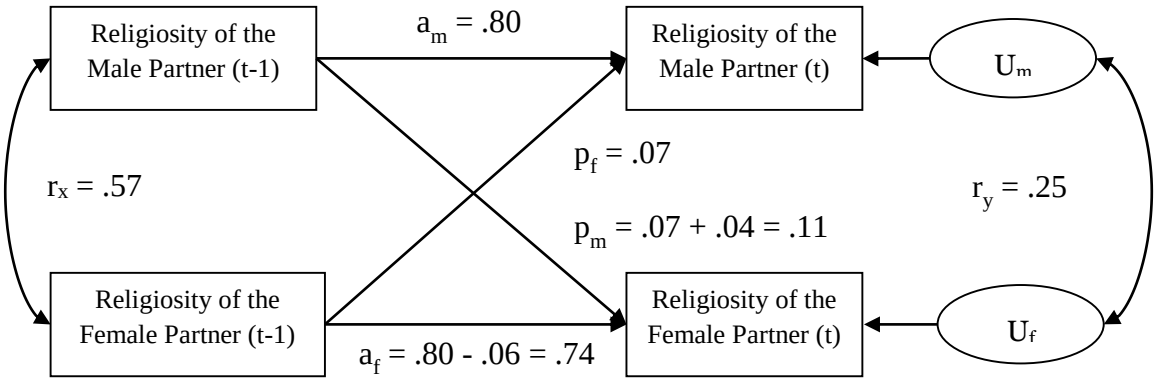
Table 4: Conditional Partner Influences on the Religiosity of the Actor in Marriages and Non-Marital Unions (Cross-lagged Actor-Partner Interdependence models, b-coefficients with t-values in parentheses)

	Model			
	1	2	3	4
Actor and Partner Effects				
Religiosity of the Actor	.80**	.77**	.78**	.78**
Time point t-1 (Actor Effect)	(42.9)	(49.4)	(50.2)	(50.0)
Religiosity of the Partner	.07**	.05**	.06**	.09**
Time point t-1 (PartnerEffect)	(3.7)	(2.7)	(2.9)	(7.4)
Moderators				
Actor Effect ×	-.06*	-.03	-.03	-.03
Woman	(-2.2)	(-1.5)	(-1.4)	(-1.6)
Partner Effect ×	.04			
Woman	(1.6)			
Partner Effect ×		.06*		
Confessional Homogamy		(2.4)		
Partner Effect ×		.04		
Both No Confession		(0.3)		
Partner Effect ×			.06*	
Marriage (Ref.: Cohabitation)			(2.2)	
Partner Effect ×			-.04	
Family Formation			(-1.4)	
Partner Effect ×				.03+
Partnership Satisfaction #				(1.9)
Control Variables				
Woman	.05**	.05**	.05**	.05**
	(3.3)	(3.4)	(3.4)	(3.4)
Confessional Homogamy		-.03		
		(1.3)		
Both No Confession		.02		
		(0.9)		
Marriage			.01	
(Ref.: Cohabitation)			(0.9)	
Family Formation			-.03	
			(-1.5)	
Partnership Satisfaction				-.02
				(-1.3)
Intercept	-.05**	-.07**	.01	-.05**
	(-4.0)	(-4.2)	(0.5)	(-4.3)
Variance within Dyads	.15**	.15**	.15**	.15**
	(25.4)	(25.3)	(23.4)	(25.4)
Variance between Dyads	.05**	.05**	.05**	.05**
	(8.7)	(8.7)	(8.6)	(8.8)
n (Pairs)			1,291	
n (Observations)			2,582	

Notes:
Source: Bamberg BEP and NEL panels (waves 1988, 1990/1992)
**** p ≤ .01; * p ≤ .05; + p ≤ .10; # = centered**

Figure 3 shows the full APIM without moderator variables. The residual correlation at time point t (r_y = .25) corresponds in this case to the "idiosyncratic" share of partner similarity, not attributable to the partners' prior values, at the second measurement time point. This may be related to particular shared experiences ("common fate") that touch on religiosity, such as some critical life event.

Figure 3: Cross-lagged APIM for Distinguishable Dyads: Religious Adaptation Processes in Partnerships



Notes:
Source: Bamberg BEP and NEL panels (waves 1988, 1990/1992)
Coefficients based on Table 4, Model 1

Models 2-4 take up again the search for conditions that influence the strength of convergence. One reasonable proposition is that partners will find mutual adaptation easier if they both belong to the same confession, because in this case their religious beliefs and practices are embedded in the same cultural framework. This proposition is supported by the empirical evidence. The partner effect is significantly stronger when the partners are of the same confession, as seen in the value (b = .06) of the interaction term "(confessional homogamy) x (partner effect)." A similar amplifying effect does not occur in the case of homogamous pairs where neither partner has a religious confession.

Models 3 and 4 test the hypothesis, derived from balance theory and discussed in section 2.1, that adaptation is more pronounced when the actor-partner relationship is strong. Indicators for strength include relationship-specific "investments" (marriage, family formation) and the subjective assessment of relationship quality. No effect is observable for family formation, but religious convergence is much more pronounced in marriages than in non-marital unions (model 3).[9] Moreover, the results of model 4 confirm, in the trend at least, that the partner effect varies with relationship quality. Davis and Rusbult (2001)

[9] Additional analyses showed that the duration of the partnership played no independent role as a moderator.

and Roest et al. (2006) report a similar moderator effect for various other attitude dimensions (cf. section 2.2). Despite the relatively strong persistence over time of religiosity and the correspondingly weak tendencies of partner convergence, partner influence in the sense of horizontal socialization is nonetheless sensitive to confessional homogamy and partnership characteristics.

5 Conclusion and Directions for Future Research

Within families, interaction processes occur that seem to increase overall cultural homogeneity over time. The goal of the present study was to review theoretical and empirical approaches useful for conceptualizing and analyzing such social context influences within families. In the special case of religiosity, the influence of socialization in the parental household is clearly stronger than influence partners later wield. But socialization paths are not one-way streets of influence. Our analysis of moderator variables shows rather that the degree of social influence exerted by a familial interaction partner depends quite decisively on the cohesion of the relationship involved, whether it be a couple or an intergenerational relationship. This finding confirms the predictions of balance theory (Heider, 1958), even as they suggest also the possibility of divergent outcomes. Specifically, the social influence of an interaction partner is likely to be weaker in cases where contact intensity is low or when the relationship is assessed more negatively, which in turn can foster increased heterogeneity of attitudes and can in the extreme case of insuperable differences lead to an abandonment of the dyad or family. On the other hand, and as argued for example by Lois (2013), value-based homogeneity can strengthen the cohesion between family members and thus also their resilience against separation or interruption of contact. In this sense, these processes are self-reinforcing, at least until they are disrupted by exogenous factors such as critical life events or other interpersonal dynamics.

Additional research should be directed to clarifying the relative importance of selection and socialization processes (cf. Arránz Becker and Lois, 2010: 1234-1248). In so doing, it should be kept in mind that longitudinal studies of familial context effects always make recourse to a selective sample of interactive relationships that have persisted over time. Thus, selection effects are excluded automatically by the method of case selection, and even the “initial” similarity of characteristics is most certainly a conglomeration of previous acts of selection – especially in horizontal pair relationships – and adaptation. To disentangle the two processes accurately, all family members would have to be observed longitudinally from before or at least from the beginning of pair and family formation. This requirement has been fulfilled, for example, in previous studies of attitudinal similarity before and after the beginning of friendships in groups, such as school classes, with relatively stable membership compositions (Laursen *et al.*, 2008: 11-38). However, it would appear to be as good as impossible to fulfill in the study of families.

The present study shows that modern multivariate methods like the Actor-Partner Interdependence Model (APIM) are powerful enough to generate detailed analyses of dyadic structures of interaction and interdependence. Moreover, they can be extended well beyond the analysis presented here. For example, it would be possible to estimate simultaneous, two-way processes of horizontal and vertical transmission over time. To date, hardly any such studies exist (Roest, Dubas and Gerris, 2009: 146-155), presumably because of the high demands they place on data material. Yet, such systematic analyses would yield an increase in the specificity and comparability of our knowledge of the "net" influence of various socialization agents. In spite of this rich analytical potential, from a methods perspective a word of caution is warranted. It must be criticized that existing studies define adaptation (on measurable characteristics) for the most part as an actor shifting towards the partner's original value on a given characteristic. Yet, this is only one of many possible definitions. It is certainly possible, for example, for partner A to align over time to partner B's position on any given characteristic, even as the partners' *difference* on that characteristic stays the same or increases. In this case, the exclusive use of a longitudinal APIM is problematic. As is typical for dynamic panel models with time-lagged dependent variables, APIM intermingles the two sources of variation – individual change and difference in relation to the partner – among pairs and within pairs over time (cf. Brüderl, 2010: 963-994). For this reason, estimation models are potentially vulnerable to selection effects because what they identify as "alignment" may stem in part from a similarity of the partners on time-constant exogenous variables. Thus it would seem necessary for future researchers to modify fixed effects and hybrid models (Allison, 2009) to make them useful for the analysis of dyads. However, as far as we know, no explicit formalizations yet exist.

In sum, the present study shows that families can be theoretically conceptualized as interaction systems with multiple reciprocal social influences among family members and that these systems can be modeled using the analytical approach described here. Such social context influences must be distinguished from spatially-specific social context effects such as regional concentrations of religious confession or practices. Empirically, however, both processes can be modeled simultaneously, for example by including the characteristics of an additional regional level (city or county) in the equation. Thus, dyadic analyses are directly compatible with modeling techniques for other kinds of context effects and should always be used in future analyses of household or family-based data. Their applicability is by no means limited in content to values and attitudes. A large number of interesting questions are possible in research applications in the area of inequality and mobility research using measures of social status or prestige.

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