

CATRIN FINKENAUER *Free University of Amsterdam—Netherlands*RUTGER C. M. E. ENGELS *University of Nijmegen—Netherlands**SUSAN J. T. BRANJE AND WIM MEEUS
*Utrecht University—Netherlands***

Disclosure and Relationship Satisfaction in Families

The present study developed a theoretical framework for understanding the social mechanisms underlying disclosure and its link with relationship satisfaction in a full family design. A study among 262 intact families, consisting of 2 children and 2 adults and involving 1,048 individuals, applied the social relations model. Results showed that disclosure was more important to satisfaction in horizontal relationships than vertical ones. Further, relationship-specific disclosure was more important to satisfaction than dispositional disclosure. These results have implications for the examination of relationship regulation and maintenance in (non)voluntary relationships and the development of psychosocial problems in parent-child relationships.

Disclosure is at the heart of most relationships (e.g., Rubin, 1973). People strategically disclose information about themselves to develop and

maintain relationships (e.g., Canary, Stafford, Hause, & Wallace, 1993). Greater disclosure in relationships is related to greater emotional involvement (e.g., Rubin, Hill, Peplau, & Dunkel-Schetter, 1980), liking (Collins & Miller, 1994), feelings of intimacy (Laurenceau, Feldman Barrett, & Pietromonaco, 1998), and relationship satisfaction (Derlega, Metts, Petronio, & Margulis, 1993). In fact, disclosure and indicators of relationship quality seem so intertwined that Derlega and his colleagues called disclosure and relationships “mutually transformative” (p. 9). Disclosure affects the definition and quality of the relationship, which in turn affect the content, meaning, and impact of disclosure.

Most theorists agree that disclosure should be conceptualized as a multifaceted social process that combines both dispositional and relational aspects (Dindia, Fitzpatrick, & Kenny, 1997). Further, as a general rule, more disclosure should be associated with more liking for the discloser (Collins & Miller, 1994). It remains unclear, however, whether dispositional aspects (we like people who disclose a lot) or relational aspects (we like people who disclose to us) of disclosure are responsible for the link between disclosure and relationship quality (Derlega et al., 1993). Further, little is known about whether findings on disclosure and the link between disclosure and quality of relationships in one type of relationship generalize to other relationships. The present study aims to enhance our understanding of disclosure, satisfaction, and their relation in families.

Department of Social Psychology, Free University, van der Boechorststraat 1, 1081 BT Amsterdam, Netherlands (c.finkenauer@psy.vu.nl).

*University of Nijmegen, Institute of Family and Child Care Studies, P.O. Box 9104, 6500 HE Nijmegen, Netherlands.

**Utrecht University, Child and Adolescent Studies, P.O. Box 80140, 3508 TC Utrecht, Netherlands.

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DISCLOSURE IN RELATIONSHIPS

Disclosure refers to the verbal communication of information about the self, including personal states, dispositions, events in the past, and plans for the future (Jourard, 1971). Research confirms that disclosure can be conceptualized as both a person's disposition to disclose (Jourard; Miller, Berg, & Archer, 1983) and as a dynamic process between two partners in a unique relational context (e.g., Dindia, 1994; Laurenceau et al., 1998). To illustrate, Dindia and her colleagues (1997) applied social relations modeling, a statistical tool developed to analyze dyadic data (Kenny & La Voie, 1984), to examine disclosure in adult relationships. Their results revealed that the level of disclosure in a relationship is a function of both partners' disposition to disclose (i.e., their typical baseline of disclosure), both partners' disposition to elicit disclosure from others, and their unique relationship (i.e., wives disclosed more to their husbands than to a stranger). Further, a dyadic reciprocity effect of disclosure emerged: Partners who disclosed more to others also received more disclosure from others (Jourard). Thus, by applying social relations modeling to dyadic relationships between adults, this study elegantly showed that dispositional and relational processes are simultaneously at work in disclosure in relationships.

Despite the abundance of research on disclosure, to our knowledge, there is no research examining disclosure in whole families. This is not to say that there is no research on disclosure in families. To illustrate, there exists a considerable body of research on adolescents' disclosure to their parents (e.g., Buhrmester & Prager, 1995; Noller & Callan, 1990), parents' disclosure to their adolescent children (e.g., Dolgin, 1996), adolescents' perception of their parents' disclosure (Dolgin & Berndt, 1997), and disclosure in sibling relationships (e.g., Howe, Aquan-Assee, & Bukowski, 1995). This research consistently shows that children disclose more to their mothers than to their fathers (for an overview see Buhrmester & Prager) and that children report feeling closer to parents to whom they disclose more (Miller & Lane, 1991). Because this research often remains descriptive, however, and because it focuses on selected subsystems within families, it draws an incomplete picture of how disclosure varies across different types of family relationships. Questions regarding disclosure as a social process occurring between family members therefore remain unanswered. Hence, the first goal of the present study was to provide more

complete evidence on disclosure processes in families.

How should disclosure in families be conceptualized? Based on existing evidence (Dindia et al., 1997), we predict that disclosure varies across each family member's disposition to disclose, across each family member's disposition to elicit disclosure from others (e.g., in some families mothers may elicit more disclosure than in other families), and across relationships (in some families, two family members disclose more to each other than in other families, thereby facilitating the development of coalitions [Jacobvitz & Bush, 1996]). Additionally, we expect disclosure to vary across families as a group.

Does disclosure reciprocity occur across all types of family relationships? We argue that it does not. Rather, we propose that disclosure reciprocity is dependent on the type of family relationship. Research shows that child parentification, the reversal of parent and child roles, may lead to adjustment problems among children (for an overview see Chase, 1999). High disclosure reciprocity between parents and children may be considered an indicator for parentification. Parents consider their children as equal partners and use them as emotional confidants. This disclosure reciprocity may increase trust and closeness in the parent-child relationship (Miller & Lane, 1991), but at the same time, it may put children at risk for psychosocial problems, because parents burden their children with their own worries and concerns (Lehman & Silverberg-Koerner, 2002; Minuchin, Rosman, & Baker, 1978). This reasoning led us to predict that disclosure reciprocity in intact families is more likely to occur in *horizontal relationships* between family members of equal status (parent-parent and sibling-sibling relationships) than in *vertical relationships* where partners have unequal status (parent-child relationships).

DISCLOSURE AND RELATIONSHIP
SATISFACTION IN FAMILIES

Disclosure and relationship quality are strongly linked (Derlega et al., 1993). A meta-analysis by Collins and Miller (1994) supports a linear relation between self-disclosure and liking in adult relationships. Their analysis revealed (a) that we disclose more to people we like, (b) that we like people more after having disclosed to them, and (c) that we like people who disclose more. In

adult relationships where partners have comparable status, disclosure seems to help partners to create the mutual liking necessary to develop intimate relationships (e.g., Lippert & Prager, 2001). Liking and intimacy, in turn, appear to be necessary conditions for the disclosure of more intimate personal information in relationships (e.g., Hendrick, 1981). Generalizing these findings to family relationships, family members who disclose more should be more satisfied with their relationships, family members should disclose more to specific family members with whom they have good relationships, and family members should be more satisfied with relationships with other family members who disclose more. Despite their appeal, these assumptions have not been substantiated because past research has included only one relationship partner or subsystem in families. Thus, the second aim of our study was to investigate the link between disclosure and relationship satisfaction in a full family design.

The strength of the proposed link between disclosure and satisfaction should be moderated by two factors. First, it should vary across types of family relationships. In horizontal relationships (i.e., parent-parent and sibling relationships), partners interact on an egalitarian and reciprocal basis (e.g., Hinde, 1979). In these types of relationships, disclosure patterns should parallel those found in earlier research (e.g., Dindia et al., 1997). On the contrary, in vertical relationships (i.e., parent-child and child-parent relationships), partners interact on a complementary basis. Children turn to their parents for help, support, and guidance. Parents usually provide help, support, and guidance to their children, but do not (and perhaps should not), in return, require help, support, and guidance from their children. Parents thereby respect implicit rules on generational boundaries and parental behavior (e.g., Minuchin et al., 1978). Hence, in well-adjusted families, disclosure should be more important to relationship satisfaction in horizontal relationships than in vertical ones.

Second, the link between disclosure and satisfaction should be moderated by type of disclosure. Disclosure in relationships may be dispositional (i.e., the discloser is a generally open person who commonly reveals personal information to everybody) or relational (i.e., intended only for this specific disclosure recipient; Dindia, 1994). Surprisingly few studies have examined which type of disclosure determines relationship quality. In the literature, two differ-

ent perspectives exist but have rarely been compared in empirical studies. The first perspective implicitly assumes that the more people disclose about themselves, the more others are satisfied with the relationship (Altman & Taylor, 1973). In contrast, the second perspective argues that relationship satisfaction will be high only when disclosure is exclusively directed at one partner (e.g., Archer & Burleson, 1980; Taylor, Gould, & Brounstein, 1981; Wortman, Adesman, Herman, & Greenberg, 1976). If disclosure is directed at everyone, because the person is a high discloser, it should not be linked to relationship satisfaction. Hence, an additional goal of the present study was to provide evidence about the relation between disclosure and satisfaction so as to determine the relative importance of dispositional and relational disclosure for relationship satisfaction in families.

ANALYTIC STRATEGIES TO STUDY DISCLOSURE AND RELATIONSHIP SATISFACTION

Because family members continuously influence each other, the study of disclosure and relationship satisfaction in families poses a challenge for researchers. How can we investigate disclosure and relationship satisfaction when family members coordinate their thoughts, feelings, and behaviors, and when these patterns of interdependence are of fundamental importance to our understanding of these phenomena (e.g., Kenny & Kashy, 1991; Kenny, Kashy, & Bolger, 1998)? The most obvious answer is to investigate entire families, yet in this case, the collected data will be statistically interdependent.

Most commonly used statistical analyses require independence of observations, which is clearly an issue in studying families. The social relations model offers one solution to this problem (e.g., Cook, 1994; Kenny & La Voie, 1984). It allows researchers to treat interdependence as an interesting phenomenon in its own right rather than a "statistical nuisance" (Kenny & Kashy, 1991, p. 277). Specifically, it allows one to identify that part of the variance in complex social behavior such as disclosure (or relationship satisfaction) that is due (a) to people's disposition to disclose to others, the so-called *actor effect* (one family member dispositionally discloses to all other family members), (b) to people's disposition to elicit disclosure from others, the so-called *target effect* (all family members disclose to one particular family member), (c) to the relationship between two

specific family members, the so-called *relationship effect* (a family member discloses to one specific partner, but not to others), and (d) to families as a whole, the so-called *family effect* (the extent to which a family as a group shows a tendency to disclose).

Further, social relations modeling allows us to assess *processes of reciprocity*. As Kenny and colleagues (1998) point out, reciprocity is one of the most fundamental elements in the investigation of social processes such as disclosure. Not only do we disclose to others but others also disclose back to us (Jourard, 1971). Social relations modeling allows us to consider this social exchange by recognizing that disclosure reciprocity can operate at the dyadic level (one family member discloses to another who discloses in return). This reciprocity effect reflects the unique disclosure that occurs between two family members and emerges when the relationship effects of two family members are correlated.

In short, the social relations model allows one to analyze interdependence in social interaction data. It recognizes that behavior occurs at different levels of a social unit by distinguishing effects due to individuals, nested in dyads, nested in families. Finally, it allows one to identify reciprocity at the dyadic level, so it is a unique tool for the examination of social processes and behavior in social systems such as families.

OVERVIEW

To test the proposed hypotheses, data were collected among 285 two-parent, two-(adolescent) children families. All four family members completed questionnaires assessing the extent to which they disclose self-relevant information to each other and the extent to which they are satisfied with their relationships with each other. Applying the social relations model, this design allows us to examine three questions that are at the core of the present study. First, how should disclosure in families be conceptualized? Second, how does relationship satisfaction in families vary as a function of disclosure? Third, is the importance of disclosure for relationship satisfaction in families a function of the type of family relationships and the type of disclosure?

By using social relations modeling in a full family design that includes both disclosure and relationship satisfaction, the present study is novel in several respects. First, it examines disclosure as a truly social process that occurs

between family members who influence each other. Second, it is the first study to investigate disclosure and its link with relationship satisfaction in different types of family relationships. Third, it is the first study to examine the relative importance of different types of disclosure for relationship satisfaction.

METHOD

Participants

Data were obtained from a study on communication, personality, and social relationships among 285 Dutch two-parent families with two adolescent children (Haselager & Van Aken, 1999, Family and Personality Research Project). The initial sample of eligible families with two adolescent children was stratified, with equal numbers of children in all age groups between 13 years and 17 years and equal numbers of boys and girls, and was randomly taken from the registers of 23 municipalities in The Netherlands. After sending a letter announcing the study, interviewers contacted the families by phone. Of the families approached in this manner, 50% agreed to participate. Frequently given reasons for not wanting to participate were that families had no interest in the topic of the project or that one family member did not want to collaborate.

The total sample included 285 families. Because social relations modeling deletes missing cases listwise, this sample was reduced to 262 families, including 1,048 individuals. Attrition analyses revealed that the exclusion of cases was merely due to single missing data entries (e.g., one younger adolescent did not rate relationship satisfaction with sibling but did complete all other variables) and not to systematic variations across families or individuals on any of the assessed variables. Given that social relations analyses were restricted to those 262 families that had complete data, however, all reported analyses were conducted on this sample.

The sample comprised 140 families (54%) with two children, 69 families (27%) with three children, 31 families (12%) with four children, and 22 families with five or more children. In 224 families (79%), the older child who participated in the study was the oldest child in the family. In 219 families (77%), the younger child had only one older sibling. In 22% of the families, more than two children fell in the age groups eligible for participation. In this case, the families

themselves decided which two children participated in the study. For reasons of clarity and statistical necessity (see below), the two children in each family are labeled *older* and *younger* child throughout the manuscript.

Fathers' mean age was 46.0 years ($SD = 3.71$) and mothers' was 43.7 years ($SD = 3.73$). The older children's (137 boys, 125 girls) mean age was 16.6 years ($SD = 0.83$), and the younger children's (124 boys, 138 girls) mean age was 14.4 years ($SD = 0.75$). Ninety-six percent of the families were of Dutch origin. A small proportion of the parents, 17% of the mothers and 19% of the fathers, had finished primary or low secondary education. Forty-six percent of the fathers and 28% of the mothers had attended college or had university education. All children lived with both biological parents.

Procedure

Trained interviewers visited the families at home, where mother, father, and each of the two children filled out a battery of questionnaires. The presence of the interviewer served to encourage thorough responding and to prevent discussions among family members during completion of the questionnaires. Both children were given a compact disc gift certificate after completion of the questionnaires. Further, families who filled out all questionnaires took part in a lottery to win one of 10 travel cheques (value of about \$900) as rewards.

Measures

Only those questionnaires relevant to the present study are described here. Given the full family design, measures were adapted to be appropriate and adequate in all types of family relationships. Relationship specificity was achieved by formulating items as statements and instructing participants to imagine each specific family member (i.e., father, mother, sibling) before rating each statement for the specific partner.

Disclosure. To assess disclosure to different partners, we adapted the Self-Disclosure Index (Miller, Berg, & Archer, 1983). The original scale consists of 10 items assessing general self-disclosure in same-sex relationships, and the necessary adjustments were twofold. First, family members separately rated the frequency with which they disclose to each specific partner.

Second, the topics of disclosure were adapted to fit all types of family relationships. To illustrate, gender may be commonly discussed among married partners, but it is not high on the priority list in conversations between parents and children (see Dolgin & Berndt, 1997). Based on the topics in the Self-Disclosure Index and topics identified in Dolgin and Berndt's (1997) study on information that parents disclose to their children, we derived nine topics relevant in all family relationships: health, finances, positive things that happened during the day, disappointments and setbacks, other family members, future plans, friends, secrets, and fears and insecurities. Family members rated the extent to which they disclosed these topics to each other on five-point scales (1 = *never*, 2 = *rarely*, 3 = *sometimes*, 4 = *often*, 5 = *almost always*). An example item is "I talk to my father about my friends." A pilot study confirmed that all identified topics were relevant topics of disclosure in parent-child relationships (Finkenauer, Engels, & Meeus, 2002). In the present study, items showed satisfactory internal consistency, ranging from .84 to .91 (mean Cronbach's alpha over 12 scales was .88). Each family member's ratings were averaged to establish three disclosure scores per person (e.g., father's disclosure to mother, to older child, and to younger child); higher values on these scores indicated greater disclosure.

Relationship satisfaction. To assess family members' satisfaction with their different relationships, participants rated each relationship on four adjectives (i.e., very good, pleasant, valuable, difficult [reverse scored]; cf. Campbell, Converse, & Rodgers, 1976). We chose this measure because it does not refer to interpersonal behaviors related to communication (e.g., I can talk openly with this person) as do most of the commonly used relationship satisfaction questionnaires (e.g., Locke & Wallace, 1959). It thereby reduces the risk of the scale yielding artificially high correlations with disclosure (see Fincham & Bradbury, 1987 for a detailed discussion). Family members rated each of their relationships on five-point scales (e.g., 1 = *not at all*; 5 = *very much*). In our study, all satisfaction scales showed a satisfactory internal consistency, with alphas ranging from .74 to .87 (mean alpha was .81). Participants' ratings were averaged to establish three relationship satisfaction scores for each person (e.g., older child's satisfaction with relationship with father, mother, and younger

sibling); higher values on these scores indicated greater satisfaction with the relationship.

Strategy for Analyses

The most common social relations design is the round-robin research design used in the present study. To reliably estimate relationship effects, the analyses require data ideally from four family members (Cook & Dreyer, 1984; Cook, Kenny, & Goldstein, 1991). Data are analyzed from both members of each possible dyad. In our case, social relations modeling analyzes families containing two parents and two children. The labels *older* and *younger* child should therefore not be considered theoretically important; rather they constitute labels to distinguish between the two members of the sibling dyad. The effects of the social relations model are, comparable to structural equation modeling, estimated from these observed data. (For a detailed description of the social relations model with family data and estimation procedure, see Kashy & Kenny, 1990; Cook, 1994, 2000.)

Social relations modeling was performed on the 3×4 covariance matrix of each family member's disclosure to and relationship satisfaction with the three other family members. This analysis explores the extent to which variance in disclosure and relationship satisfaction in each of the 12 family relationships is due to actor, target, relationship, and family effects. All effects are estimated separately, controlling for all other effects. For example, a relationship effect is estimated after controlling for actor, target, and family effects. The different variances for disclosure and relationship satisfaction were simultaneously estimated using structural equation modeling with maximum likelihood estimation procedures (Jöreskog & Sörbom, 1993, LISREL 8.30). Missing cases were deleted listwise, which reduced the sample to 262 families. Given the small sample size of the subgroups and the required power, distinguishing sons from daughters or same-sex from mixed-sex sibling pairs in social relations modeling was not feasible. To explore gender differences in disclosure, ancillary analyses of variance were conducted, which will be described below.

For a four-person family, there are 12 unidirectional indicators of disclosure and 12 unidirectional indicators of satisfaction. To separately estimate relationship effects and error variances, we treated split-half scales of disclosure and

satisfaction as separate indicators of disclosure and satisfaction, which produced 24 observed scores of disclosure and 24 of satisfaction (12 relationships \times 2 scales; see Cook 1993, 1994, 2000). Next, a single social relations model analysis was conducted with each of the two disclosure and satisfaction scales (the indicators) included to partition the variance in disclosure and satisfaction into actor, target, relationship, and family effects for disclosure and satisfaction, respectively. We allowed for correlations among measurement errors for each indicator per rating family member (e.g., for each indicator of father's disclosure, we allowed father's measurement errors for their disclosure to mother, older child, and younger child to correlate).

The actor, target, relationship, and family effects technically constitute separate factors or latent variables within a confirmatory factor analysis (cf. Cook, 1994). The factor loadings (i.e., paths from the latent variables to the indicators) were all fixed at 1.0 and the variances were then estimated. In the same model, we also estimated the hypothesized relations between the social relations components of disclosure and satisfaction.

We did not estimate separate models for disclosure and satisfaction but instead estimated both concepts—as well as the hypothesized relations between them—in a single model. The significance level for the estimated components in this model was set at $p < .01$. Thus, we conducted a conservative test of the model. Despite its complexity, it showed a good fit in our data set. The χ^2 of this model was 1516.60, $p < .01$, $df = 963$, the Non-Normed Fit Index (NNFI) was .95, and the root mean square error of approximation (RMSEA) was .04, indicating an acceptable fit of the overall model (Browne & Cudeck, 1989).

RESULTS

The literature is replete with evidence on gender differences in disclosure (e.g., Buhrmester & Prager, 1995; Dindia & Allen, 1992). Before addressing the three questions that were at the core of our study, we describe analyses of variance that were conducted to explore gender differences in mean levels of disclosure in our sample.

To compare the level of disclosure in same-sex sibling dyads and mixed-sex sibling dyads, each child's disclosure scores were submitted to a multiple analysis of variance (MANOVA) with birth order as a within-subjects factor, and gender

of discloser and gender of target as between-subjects factors. A marginal effect for birth order indicated that older children reported disclosing less information to their younger sibling ($M=2.96$) than vice versa ($M=3.06$), $F(1, 258)=3.13$, $p=.078$, $\epsilon^2=.012$. Further, a main effect for gender of discloser revealed that dyads in which the older child was a girl showed greater levels of disclosure ($M=3.13$) than dyads in which the older child was a boy ($M=2.90$), $F(1, 258)=9.40$, $p=.002$, $\epsilon^2=.035$. This main effect was moderated by a significant interaction between gender of older and gender of younger child, $F(1, 258)=12.25$, $p=.000$, $\epsilon^2=.060$, indicating that female-female dyads reported disclosing more to each other than all other dyad constellations (results not shown). These results replicate findings from earlier research, showing that girls disclose more to girls. Girl-to-boy disclosure and boy-to-girl disclosure, however, was not greater than boy-to-boy disclosure (Dindia & Allen, 1992).

To compare boys' and girls' levels of disclosure toward mother and father, younger and older children's disclosure scores were submitted to a MANOVA with parent (father versus mother) as a within-subjects factor, and gender of child as a between-subjects factor. For older children, a main effect for parent yielded that both girls and boys reported disclosing more information to their mothers ($M=3.55$) than to their fathers ($M=3.33$), $F(1, 260)=62.28$, $p=.000$, $\epsilon^2=.193$. This main effect was moderated by an interaction with child's gender, $F(1, 260)=8.11$, $p=.005$, $\epsilon^2=.030$, indicating that boys' and girls' levels of disclosure were comparable for fathers ($M=3.30$ and $M=3.35$, respectively), but girls ($M=3.66$) disclosed more than boys ($M=3.45$) to mothers. The same pattern of results emerged for younger children. A main effect for parent, $F(1, 260)=94.03$, $p=.000$, $\epsilon^2=.266$, was moderated by a significant interaction, $F(1, 260)=18.45$, $p=.000$, $\epsilon^2=.066$. Boys and girls did not differ in their levels of disclosure to fathers ($M=3.26$ and $M=3.20$, respectively), but girls ($M=3.56$) disclosed more to mothers than did boys ($M=3.40$).

Taken together, these results confirm that children disclose more information to mothers than to fathers (for an overview, see Buhrmester & Prager, 1995). Further, they parallel the results found for the gender constellation of sibling dyads. The disclosure level is highest in female pairs, in this case when daughters disclose to mothers.

How Should Disclosure in Families Be Conceptualized?

Confirming that disclosure in families varies as a function of each member's disposition to disclose, Table 1 shows that all actor effects for disclosure (father, mother, older child, younger child) were significant. These findings indicate that individual family members differed in their dispositions to disclose to other family members, some family members tend to disclose to others, and others are less open, regardless of their particular family roles. Disclosure was also relationship specific. All relationship effects for disclosure were significant (Table 1), indicating that the extent to which one family member discloses to another depends on the unique relationship between those two family members in a specific family. To illustrate, mother's disclosure to father differs across families (some mothers disclose much to their partners, others less). Additionally, disclosure varied across families as reflected by a significant family effect (Table 1). Hence, in some families, disclosure is greater than in others, independent of individual family members' dispositions to disclose and their disclosures in unique relationships. Disclosure does not seem to depend on a family member's disposition to elicit disclosure from others. The only significant target effect emerged for fathers, suggesting that family members differ in the extent to which they disclose to the father (some fathers elicit much more disclosure from all family members than others).

Understanding the importance of each social relations component is facilitated by calculating the extent to which each component contributes to explaining variance in disclosure. Table 2 presents the contributions of the components (i.e., percentages of the variance explained by each social relations effect) to the total construct variance (i.e., excluding error variance) in disclosure in specific dyadic relationships. To illustrate, the total construct variance in mother's disclosure to father consists of the sum of the variances for mother's actor effect, father's target effect, the mother-father relationship effect, and the family effect. The contribution of mothers' actor effects to the total variance in mother's disclosure to fathers is computed by dividing mother's actor effect by the total construct variance.

The largest part of the variance in disclosure was explained by actor (between 27% and 53%) and relationship (between 31% and 54%) effects.

TABLE 1. SOCIAL RELATIONS MODEL VARIANCE ESTIMATES FOR DISCLOSURE AND SATISFACTION (N = 262 FAMILIES)

		Disclosure	Satisfaction
Actor effect	F	.150*	.090*
	M	.090*	.069*
	O	.174*	.208*
	Y	.212*	.204*
Target effect	F	.017*	.008
	M	-.000	.007
	O	.002	.002
Relationship effect	FM	.098*	.135*
	FO	.214*	.086*
	FY	.209*	.038*
	MF	.171*	.168*
	MO	.145*	.075*
	MY	.158*	.040*
	OF	.151*	.101*
	OM	.132*	.062*
	OY	.267*	.279*
	YF	.127*	.064*
	YM	.129*	.029*
Family effect	YO	.257*	.216*
		.063*	.069*

Note: F = father; M = mother; O = older adolescent; Y = younger adolescent; FM = disclosure of father to mother (or father's satisfaction with relationship with mother); FO = disclosure of father to the older adolescent; FY = disclosure of father to the younger adolescent; MF = disclosure of mother to father, and so on.

* $p < .01$.

Family effects explained between 11% and 20% of the variance in disclosure. Target effects contributed very little to the variance in disclosure in dyadic relationships (between 0% and 5%). In line with the above described results, differences

in disclosure do not seem to depend much on individual family members' dispositions to elicit disclosure from others.

Interestingly, although this observation cannot be tested, relationship effects contributed more to the variance in certain relationships than actor effects, whereas in other relationships, the reverse pattern emerged. Relationship effects were more important than actor effects for parent-parent disclosure ($M = 41\%$ versus $M = 37\%$), parents' disclosure to their children ($M = 50\%$ versus $M = 33\%$), and sibling disclosure ($M = 52\%$ versus $M = 37\%$). The pattern was reversed for children's disclosure to parents, where actor effects explained more of the variance in children's disclosure than relationship effects did ($M = 48\%$ versus $M = 35\%$). Thus, parents' disclosure in families appears to depend more strongly on the type of relationships in which they disclose (e.g., the extent to which mothers disclose differs according to whether they disclose to their husbands or to their children) than on parents' dispositions to disclose. The same applies to sibling relationships. With respect to disclosure from children to parents, however, it seems that children's disposition to disclose makes more of a difference than the specific relationships they have with their parents. Some children seem to disclose to their parents (both of them) and others do not.

Is disclosure reciprocal? Dyadic reciprocity correlations were estimated by correlating the relationship effects for disclosure for two family members. As predicted, dyadic disclosure

TABLE 2. PERCENTAGE OF VARIANCE EXPLAINED BY THE SOCIAL RELATIONS MODEL VARIANCE ESTIMATES (N = 262 FAMILIES)

	Disclosure				Satisfaction			
	Actor	Target	Relationship	Family	Actor	Target	Relationship	Family
FM	48	0	32	19	29	2	46	23
FO	36	0	50	14	36	1	36	28
FY	36	0	50	14	42	7	19	33
MF	27	5	50	18	22	3	53	22
MO	30	1	50	20	32	1	36	32
MY	29	0	52	20	36	7	21	36
OF	43	4	38	15	54	2	26	18
OM	47	0	36	17	61	2	17	20
OY	34	0	54	12	37	2	49	12
YF	50	4	31	14	59	2	18	21
YM	53	0	33	15	65	2	10	23
YO	39	0	49	11	41	0	45	14

Note: FM = disclosure of father to mother (or father's satisfaction with relationship with mother); FO = disclosure of father to the older child; FY = disclosure of father to the younger child; MF = disclosure of mother to father, and so on.

TABLE 3. DYADIC RECIPROCITY FOR RELATIONSHIP-SPECIFIC DISCLOSURE AND SATISFACTION
(*N* = 262 FAMILIES)

	Disclosure	Satisfaction
FM-MF	.38*	.63*
FO-OF	.11*	.46*
FY-YF	.02	.18
MO-OM	.04	.10
MY-YM	.05*	.07
OY-YO	.71*	.49*

Note: FM = disclosure of father to mother (or father's satisfaction with relationship with mother); FO = disclosure of father to the older child; FY = disclosure of father to the younger child; MF = disclosure of mother to father, and so on.

* $p < .01$.

reciprocity was stronger in horizontal family relationships (i.e., parent and sibling relationships; see Table 3, upper panel) than in vertical relationships (i.e., parent-child and child-parent relationships), where it was not significant or very low. For example, the more mother reported disclosing to father, the more father reported disclosing to mother. Disclosure reciprocity was higher in sibling relationships than in parent relationships. Thus, married partners and siblings appear to match their level of disclosure. This does not appear to be the case in parent-child relationships, however.

Social Relations Model Findings for Satisfaction

For reasons of consistency and to test the hypothesized disclosure-satisfaction relations, the model for relationship satisfaction was tested in the same fashion as the one for disclosure. As can be seen in Table 1, the results for relationship satisfaction largely parallel those for disclosure. All actor effects were significant, indicating that there are individual differences in how satisfied individual members are with their relationships with other family members. In addition, all relationship effects were significant, indicating that the extent to which family members are satisfied with their family relationships depends on the unique relationship between two family members. The significant family effect indicates that there are between-family differences in relationship satisfaction. Similar to the results for disclosure, satisfaction does not seem to depend on relationship partners. The only significant target effect emerged for younger children, indicating

that families differ in the extent to which all members are satisfied with their relationships with the younger child.

The relative importance of social relations components in accounting for variance in satisfaction again paralleled those for disclosure. The largest part of the variance was explained by actor and relationship effects (see Table 2; 22% to 65% and 10% to 53%, respectively). Relationship effects were more important in horizontal relationships, and actor effects were more important in vertical relationships. Relationship effects contributed more than actor effects to the variance in parents' satisfaction with their marital relationships ($M = 50\%$ versus $M = 26\%$), and in children's satisfaction with their sibling relationships ($M = 47\%$ versus $M = 39\%$). In contrast, actor effects contributed more to the variance in satisfaction in parent-child and child-parent relationships ($M = 37\%$ and 60%) than relationship effects ($M = 28\%$ and 18%). Target effects contributed little to the variance in dyadic relationship satisfaction (between 0% and 7%). Family effects contributed somewhat more to the variance in satisfaction ($M = 23\%$) than in disclosure ($M = 16\%$), indicating that satisfaction is somewhat more dependent on families as a whole than is disclosure.

Is relationship satisfaction reciprocal? Similar to disclosure, for relationship satisfaction, dyadic reciprocity was more prevalent in horizontal relationships than in vertical relationships (see Table 3, upper panel). In contrast to disclosure, satisfaction reciprocity was larger in the marital relationship than in the sibling relationship. The only significant dyadic satisfaction reciprocity in vertical relationships emerged for the father-older child relationship. Thus, married partners and siblings seem to coordinate their feelings about the relationship. With the exception of father-older child relationships, this is not the case in parent-child and child-parent relationships, where one person may be satisfied with the relationship whereas the other is not.

How Does Relationship Satisfaction in Families Vary as a Function of Disclosure?

Are family members who disclose more also more satisfied with their relationships? The hypothesis that family members who disclose more to other family members are also more satisfied with their family relationships was tested at

both the individual and the dyadic levels. At the individual level, the correlations between a family member's actor effect for disclosure and that family member's actor effect for satisfaction were significant for all four family members (Table 4). Family members who disclose more to all other family members also appear to be more satisfied with their relationships with all family members.

At the dyadic level, the correlations between a family member's relationship effect for disclosure and that family member's relationship effect for satisfaction were computed (Table 4). Our predictions were partly confirmed. Disclosure and satisfaction were related in horizontal relationships. In vertical relationships where disclosure went from parents to children, consistent with our prediction, disclosure and satisfaction were weakly related or unrelated. Contrary to our prediction, they were related in vertical relationships where disclosure went from children to parents. Put differently, fathers and mothers who are more satisfied with their marital relationships disclose more to their spouses than fathers and mothers who are less satisfied. Children who are more satisfied with specific relationships also disclose more in these relationships than do children who are less satisfied. Parents who are more satisfied with their relationships with their children, however, do not seem to disclose more to them than parents who are less satisfied. The family effect for disclosure is significantly correlated with the family effect for relationship satis-

faction (Table 4). This finding suggests that families who disclose more have more satisfactory relationships (and vice versa).

Taken together, these results suggest that the finding that people like those to whom they disclose extends to families, because family members who disclose more in unique relationships are also more satisfied with these relationships. There is an important exception to this pattern, however: In parents' relationships with their children, disclosure and satisfaction appear to be unrelated.

Is relational disclosure more important for the recipient's relationship satisfaction than dispositional disclosure? Finally, we examined whether the finding that people like those who disclose more extends to families. In addition, we tested whether relational disclosure is relatively more important than dispositional disclosure for the recipient's relationship satisfaction—that is, whether people like those who disclose to *them* or whether they like people who generally disclose. As can be seen in Table 5, with regard to the question of whether family members are satisfied with relationships with partners who dispositionally disclose more, only 3 of the 12 correlations between actor effects for disclosure and relationship effects for satisfaction were significant. Interestingly, except for the correlation between mother's actor effect for disclosure and father-mother relationship effect, these correlations were negative. This indicates that a family

TABLE 4. CORRELATIONS BETWEEN SOCIAL RELATIONS MODEL COMPONENTS OF DISCLOSURE AND SATISFACTION (N = 262 FAMILIES)

Actor Effect Disclosure- Actor Effect Satisfaction		Relationship Effect Disclosure- Relationship Effect Satisfaction		Family Effect Disclosure- Family Effect Satisfaction
F	.75*	FM	.55*	.87*
M	.85*	FO	.12*	
O	.49*	FY	.10*	
Y	.50*	MF	.74*	
		MO	.00	
		MY	.08*	
		OF	.69*	
		OM	.74*	
		OY	.77*	
		YF	.59*	
		YM	.63*	
		YO	.81*	

Note: F = father; M = mother; O = older adolescent; Y = younger adolescent; FM = disclosure of father to mother (or father's satisfaction with relationship with mother); FO = disclosure of father to the older child; FY = disclosure of father to the younger child; MF = disclosure of mother to father, and so on.

* $p < .01$.

TABLE 5. CORRELATIONS BETWEEN SOCIAL RELATIONS MODEL COMPONENTS OF DISCLOSURE AND SATISFACTION (N = 262 FAMILIES)

Actor Effect Disclosure- Relationship Effect Satisfaction		Dyadic Reciprocity Disclosure-Satisfaction	
F-MF	.03	FM-MF	.43*
F-OF	-.07	FO-OF	.15*
F-YF	-.22*	FY-YF	.08*
M-FM	.27*	MF-FM	.35*
M-OM	-.17	MO-OM	.04
M-YM	-.09	MY-YM	.01
O-FO	-.08	OF-FO	.35*
O-MO	-.03	OM-MO	.04
O-YO	-.11	OY-YO	.67*
Y-FY	.03	YF-FY	-.11
Y-MY	-.19*	YM-MY	.13*
Y-OY	.10	YO-OY	.43*

Note: F = father; M = mother; O = older adolescent; Y = younger adolescent; FM = disclosure of father to mother (or father's satisfaction with relationship with mother); FO = disclosure of father to the older child; FY = disclosure of father to the younger child; MF = disclosure of mother to father, and so on.

* $p < .01$.

member's disposition to disclose is not or is even slightly negatively related to the partner's relationship satisfaction.

In contrast, the correlations between a family member's specific relationship satisfaction and the partner's disclosure in that relationship were significant in 8 of the 12 cases. Importantly, they were strongest in horizontal relationships, indicating that the more an individual family member in a marital or sibling relationship discloses, the more the relationship partner is satisfied with the relationship. For vertical relationships, another picture emerged. Of the eight parent-child and child-parent relationships, four correlations were not significant and three correlations were significant but not particularly high. The only substantial correlation emerged for the older child-father dyad. Thus, in vertical relationships, disclosure by one relationship partner does not seem to strongly contribute to the other partner's relationship satisfaction.

Finally, we took a closer look at the relative importance of people's dispositional versus relational disclosure for others' relationship satisfaction. In social relations modeling terms, we compared the correlations between a family member's relationship satisfaction and (a) the partner's actor effect of disclosure (i.e., one partner's relationship effect satisfaction, other partner's dispositional disclosure) and (b) the partner's relationship effect for disclosure (i.e., one partner's relationship effect satisfaction, other partner's relational disclosure; see Table 5).

This comparison showed that, in horizontal relationships, a partner's relational disclosure is more important to the recipient's relationship satisfaction than is the partner's general disposition to disclose. Thus, relationship partners with equal status seem to like those who disclose to *them* more than those who disclose more in general. In vertical relationships, neither dispositional nor relational disclosure appears to make much of a difference for recipients' relationship satisfaction. Thus, relationship partners with unequal status seem to like those who do and those who do not disclose to them. Whether parents disclose to their children does not seem to contribute to the satisfaction children experience in their relationships with their parents. Similarly, whether children disclose to their parents does not seem to contribute to parents' satisfaction with their relationships with their children.

DISCUSSION

The present study applied social relations modeling (Kenny & La Voie, 1984) to examine disclosure, relationship satisfaction, and their association in families. It is the first study that examined the relative importance of relational versus dispositional disclosure for relationship satisfaction. In addition, it is the first to differentiate between horizontal and vertical family relationships when examining the three questions at the heart of the present study, each of which is discussed below.

The social relations model does not examine mean differences, but differences in variations. When examining mean differences, our sample of children and parents showed the same gender differences that have been well established in the literature (Buhrmester & Prager, 1995; Dindia & Allen, 1992; Miller & Lane, 1991). That is, children disclosed more to their mothers than to their fathers, and girls disclosed more than boys. In addition, the disclosure level was highest in female-female relationships, independent of whether disclosure occurred in mother-daughter or sister-sister relationships. In all other relationships, independent of the gender constellation, the disclosure level was comparable (Dindia & Allen, 1992). Larger gender differences may emerge if one were to consider, for example, the emotional content of disclosure (e.g., Barrett, Robin, Pietromonaco, & Eysell, 1998; Timmers, Fischer, & Manstead, 1998).

How Should Disclosure in Families Be Conceptualized?

Applying social relations modeling, our findings confirm that disclosure is a multifaceted concept that combines both dispositional and interpersonal processes (Dindia et al., 1997; Miller & Kenny, 1986). Adding to previous findings, disclosure also varied across families. Hence, disclosure in families should be conceptualized as a social phenomenon that combines individual, relational, and group processes.

Disclosure in different types of family relationships. Our findings clearly challenge the often implicit assumption that research findings regarding one type of relationship generalize to other types of relationships. In contrast to findings from adult relationships (Dindia et al., 1997), no target effects for disclosure in families emerged. This may be due to the type of disclosure that was assessed in our study. Indeed, studies assessing disclosure behavior find target effects (Dindia et al.), whereas studies assessing perceptions of disclosure fail to find target effects (e.g., Miller & Kenny, 1986). Another explanation may be more theoretically meaningful. In the social relations model, the absence of an effect may be interpreted in two ways. On the one hand, people's disposition to elicit disclosure from others may be less important in families than it is in other relationships. In families, members are not free to select the best listener; rather, they

must disclose both to those who are good listeners and those who are bad listeners. On the other hand, the absence of a target effect may also indicate that disclosers rate other members' listener qualities in a comparable fashion across all families who participated in our study. For example, mother may be perceived to be a good listener and the younger child to be a bad listener by all family members in all families. Because the social relations model does not allow us to distinguish between these two explanations, research must be designed to compare disclosure in family relationships with disclosure in other relationships. Additionally, because our findings and existing research indicate that, as compared to men, women elicit more disclosure from both males and females (Collins & Miller, 1994), future research should also examine disclosure in same-sex and mixed-sex relationships.

In addition, relationship effects were more important than actor effects for disclosure in horizontal relationships and in those vertical relationships where disclosure occurred from a parent to a child. In these types of relationships, the level of disclosure is more likely to be determined by relational processes than by the dispositions of each partner. Further, parents more than children seem to adjust their levels of disclosure to the specific disclosure partner. In our study, mean differences indicated that female siblings disclosed more to each other than male siblings and male-female siblings (cf. Howe et al., 1995). Studies should investigate the extent to which variation in sibling disclosure across families is related to siblings' gender or to other factors such as age difference or quality of the relationship.

In vertical relationships where disclosure occurred from child to parent, actor effects were more important than relationship effects. Children appear to vary in their disposition to disclose to their parents, with some children being more open than others. Children who are open are open toward both parents. Thus, previous findings that children disclose more to their mothers than their fathers (for an overview, see Buhrmester & Prager, 1995) should be qualified. Although children in our sample disclosed more to their mothers than to their fathers (in terms of mean differences), social relations analyses showed that children who tend to disclose much to their mothers also tend to disclose much to their fathers.

Finally, dyadic disclosure reciprocity was strong in horizontal relationships but absent or

weak in vertical relationships. Partners in horizontal relationships (in our case, family members with similar family status) match their levels of disclosure (Dindia et al., 1997; Jourard, 1971). Partners in vertical relationships (in our case, family members with different or complementary status; Hinde, 1979) do not seem to match their levels of disclosure. Vertical relationships may not require a quid pro quo principle for disclosure, which may in fact be functional and healthy. High dyadic reciprocity of disclosure in the parent-child relationship may be an indication of a lack of intergenerational boundaries (Lehman & Silverberg-Koerner, 2002; Minuchin et al., 1978). When a parent and a child engage in highly reciprocal disclosure and the parent does not disclose much to more appropriate family members, child adjustment may be negatively affected (see Jacobvitz & Bush, 1996; Lehman & Silverberg-Koerner). Given the important implications of this finding for the development of adjustment problems in children, future studies should examine whether so-called enmeshed families (Minuchin et al.) with permeable boundaries between parents and children show greater dyadic reciprocity of disclosure between parents and children than do families with stronger intergenerational boundaries.

How Is Disclosure Linked to Relationship Satisfaction?

The social relations model allowed us to investigate the link between disclosure and satisfaction at the individual and the dyadic levels. On the individual level, family members who disclosed more were also more satisfied with their family relationships. On the dyadic level, children who disclosed more to a specific family member were also more satisfied with their relationship with that specific family member, and spouses who disclosed more to each other were more satisfied with their marital relationship. Our results suggest that, in horizontal relationships and in child-parent relationships, partners disclose to the ones they like and like the ones to whom they disclose. In parent-child relationships, however, this effect did not emerge. Parents' level of satisfaction with their relationships with their children was not related to their levels of disclosure to their children. Finally, families who disclosed more had more satisfactory relationships. Overall, these findings strongly parallel findings on adult relationships—between both intimates and stran-

gers—showing that high disclosure is strongly linked to high relationship quality (Dindia et al., 1997; Lippert & Prager, 2001). They also shed new light on ongoing questions surrounding the mutually transformative nature of disclosure and relationships (Derlega et al., 1993). Indeed, some authors argue that disclosure should become a less important determinant of relationship satisfaction over time (Hendrick, 1981). As couples build their relationships, other variables (e.g., shared activities) become more important, diminishing the impact of disclosure. However, we found that disclosure remains strongly linked to satisfaction for both men and women even when marriages last for 15 years or more, suggesting that disclosure and satisfaction remain mutually transformative from the beginning to the end of a relationship (Baxter, 1987).

Applying social relations modeling also allowed us to examine the relative importance of relational and dispositional disclosure for relationship satisfaction. In general, we found little support for a link between dispositional disclosure and relationship satisfaction. Apparently, family members who generally disclose are not better liked than family members who do not. In contrast, relational disclosure seemed to make a difference: Family members who disclose to a specific partner are better liked by that partner (cf. Archer & Burleson, 1980; Taylor et al., 1981; Wortman et al., 1976), above and beyond the discloser's disposition to disclose. This process seems to operate primarily in horizontal family relationships. In relationships between equals, we like the ones who disclose to *us*. In vertical relationships, this process was weak or not significant. It is possible that partners in vertical relationships are more accepting and less conditional than partners in horizontal relationships. If partners in horizontal relationships perceive their partners to disclose less frequently to them, they may attribute this lack of disclosure to a poorly functioning marital (Finkenauer & Hazam, 2000) or sibling relationship (Howe et al., 1995). Partners in vertical relationships, however, may attribute it to implicit relationship rules (Lehman & Silverberg-Koerner, 2002).

Strengths, Limitations, and Implications

To our knowledge, the present study is the first to explicitly examine disclosure and relationship satisfaction in families. The results of this study are both consistent with existing findings and

new. They confirm findings on disclosure reciprocity and the mutually transformative nature of disclosure and relationships. More importantly, they emphasize important differences between different types of family relationships. At the same time, there are several limitations of the present study.

First, our sample consisted of moderately to highly educated parents and well-adjusted adolescent children. Problematic families were rare, restricting the variation in disclosure and satisfaction. Second, it is possible that parents disclose other information to their partners than to their children, or that siblings talk about other kinds of feelings or activities than parents do. These possibilities were not included in our measurements, and future studies should investigate whether content-specific assessments of disclosure in families provide different insights than more general assessments of disclosure. Third, our study does not offer information on the mechanisms and dynamics underlying disclosure, satisfaction, and their relation in families. How does disclosure reciprocity in families develop? Which factors play a role in determining who discloses what to whom? What are possible mediators between disclosure and relationship satisfaction (e.g., affection, security, trust)? Does the strength of the link between disclosure and satisfaction vary over time? Longitudinal and observational methods are needed to investigate these questions (e.g., Dindia et al., 1997). Finally, our study did not examine how and why disclosure, satisfaction, and their relation differed across vertical and horizontal family relationships. Feelings of commitment, responsibility, power, or closeness should be investigated to enhance our knowledge of reasons for the observed differences between types of relationships.

We outline two broad implications of the present study. First, combining a full family design with social relations modeling allowed us to examine interdependent data on disclosure and relationship satisfaction in families and to question the widespread, often implicit assumption that research findings on adult relationships generalize to all types of relationships. This knowledge is crucial for our understanding of the ways in which people develop, maintain, and regulate relationships across different relationship partners. Second, our study emphasizes the social nature of the link between disclosure and relationship satisfaction. Relational processes appear to play a far more important role in this link than

individual differences, and their importance appears to be determined by the type of family relationship. Indeed, they appear much more important in vertical than in horizontal family relationships. These results may have important implications for the examination of psychosocial problems in parent-child relationships that await further investigation.

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