

How Stable Is Marital Interaction Over Time?

JOHN MORDECHAI GOTTMAN, Ph.D.†
ROBERT WAYNE LEVENSON, Ph.D.‡

This is a report of the degree of stability in affective marital interaction over a 4-year period. There were statistically significant levels of stability in overall emotionality, and in positive and negative affect, particularly for wives. There was also stability for specific affects but, except for humor and listener backchannels, these varied with gender. Women were more stable than men in overall negative and positive affect. Men were more stable than women in belligerence, contempt, and tension/fear. Women were more stable than men in whining.

Fam Proc 38:159-165, 1999

IN this article, we examine the extent to which marital interaction patterns are stable over time, particularly emotional aspects of marital interaction. The question of how stable marital interaction is over time has received very little attention. To our knowledge, there are only three published studies on the question, one by Raush, Barry, Hertel, and Swain (1974), the second by Belsky, Spanier, and Rovine (1983), and the third by Deal, Hagan, and Anderson (1992).

† James Mifflin Professor of Psychology, Department of Psychology, University of Washington, Box 351525, Seattle WA 98195; e-mail: johng@u.washington.edu.

‡ Director, Institute for Personality Research, Department of Psychology, University of California, Berkeley.

The Raush et al. study was an investigation of the transition to parenthood that took repeated observations of 13 couples who engaged in marital interaction in three phases: the newlywed phase, pregnancy, and after the birth of the first child. That study used two improvised conflict acting situations, in which a coach separated husband and wife, and described their separate positions in an improvised acting vignette; for example, the wife might be coached that she wanted to watch a television show about babies and the husband that he wanted to watch a sporting event, and the couple then were asked to pretend that this was really their own conflict.

The Belsky et al. (1983) study also examined the change in marital patterns across the transition to parenthood and found a decline in positive affection from the first month of the baby's life to 9 months. Unlike the Raush et al. study, the context studied was not a marital interaction. It involved both parents at home playing with the baby, and the marital interaction codes were quite limited. They were limited to: total engagement, baby-related interaction, joint attention, non-baby-related interaction, and positive affection.

The Deal et al. (1992) study reported three repeated observations in approximately 2 years; the time periods between waves one and two averaged 12.8 months, and between waves 2 and 3 averaged 9.3

months (E. Mavis Hetherington, personal communication, January, 1996). The Deal et al. study used marital interaction but only sampled disagreements about children for all couples in order to elicit the marital conflict discussions.

What were the conclusions of these three studies about the stability of marital interaction? The Raush et al. study concluded that there was considerable stability in marital interaction over time. However, they used a multivariate information statistic that provided a table of percent reduction in uncertainty, but no statistical tests of significance. They did not provide standard estimates of stability or change, nor did they stipulate the stability by specific variables. This makes the data analyses difficult to evaluate or to compare to the results of other studies. Despite the lack of standard statistical testing, the Raush et al. study concluded that there was considerable stability in marital interaction over time, but that during only the pregnancy phase did husbands become temporarily more agreeable, or "reconciling," while wives became more temporarily "coercive" and less "cognitive." As noted, these conclusions were reached without any statistical tests.

Belsky et al. reported significant but low to moderate levels of consistency (over the period of the first baby's life from months 1 to 9) in marital interaction while the couple was playing with the baby. The correlations were total engagement, .38, $p < .01$; baby-related interaction, .38, $p < .01$; joint attention, .37, $p < .01$; non-baby-related interaction, .30, $p < .05$; and positive affection, .16, not significant.

In the Deal et al. study, because of a printer's error, the same table of stability correlations was presented twice in the article instead of once, but there were different numbers given each time. There was no explanation given for this anomaly, but we contacted E. Mavis Hetherington

(the first author of the SRCD Monograph). She clarified that the table on page 85 was actually supposed to present correlations across the following topics of discussion: conflict over daily routines, depression, housekeeping roles, and childcare roles (E. Mavis Hetherington, personal communication, January, 1996). The marital interaction variables were limited to "positivity" and "negativity." For positivity these correlations ranged from .34 to .71 between waves 1 and 2, and between .04 and .60 between waves 1 and 3; for negativity they ranged from .44 to .61 between waves 1 and 2, and between $-.02$ and .62 between waves 1 and 3. Thus, the Deal et al. study reported moderate to high levels of the stability of marital interaction over one to two years time.

None of the studies tested stability separately for men and women or reported gender differences. All studies involved major normative development transitions in marriage. As noted, the Deal et al. study was also a study of a marital transition. The sample involved newly remarried or blended families, and they reported three repeated observations in approximately 2 years.

In summary, all three sources concluded that marital interaction has some stability over time, but to considerably varying degrees. However, because of the issues we have raised in this review, it is difficult to reach a definitive conclusion from these three studies about the general stability of marital interaction over time.

In this article, we examine patterns of *emotional* expression during non-improved marital conflict resolution in which the real conflict issues were determined by the couple, and across a longer, non-normative period of 4 years. We have limited ourselves to the domain of emotion because investigators in the area of marital interaction have been drawn by data to conclude that emotional expressions form

the best set of correlates of marital satisfaction (for a review see Gottman, 1994). In fact, most studies have summarized their data as either positive or negative interaction, variously defined. Furthermore, we have found emotional patterns of interaction predictive of marital stability or dissolution (Gottman, 1993, 1994; Gottman and Levenson, 1992). To summarize briefly these divorce prediction results: in three separate longitudinal studies it was possible to identify specific dysfunctional patterns of conflict resolution that predicted a couple's cascade toward divorce (Gottman, 1994; Gottman, Coan, Carrere, and Swanson, 1998; Gottman and Levenson, 1992). Similar results have been replicated in other laboratories (Matthews, Wickrama, and Conger, 1996). In these studies, the most consistent, specific affective predictors of divorce during the resolution of conflict were: disgust, contempt, defensiveness, stonewalling, domineering, and belligerence (codes are defined in the Methods section below). Recently, in a 9-year longitudinal study of newlywed couples, Gottman et al. (1998) found that positive affect was the only predictor of marital stability or dissolution as well as eventual marital satisfaction of those couples who stayed married. Hence, in this report we will examine the stability of positive as well as negative affect, and the stability of specific affects.

METHODS

To avoid repetition, we will abbreviate sections already discussed in our preceding article in this issue— "What predicts change in marital interaction over time? A study of alternative models" (see its Methods Section, pp. 146–150 for more details).

Participants and Procedures

Using a two-stage sampling procedure, 79 couples were recruited. Couples ar-

rived in our laboratory after having not spoken for at least 8 hours. After recording devices for obtaining physiological measures were attached, couples had three 15-minute conversations: (a) discussing the events of the day; (b) discussing the major problem area of continuing disagreement in their marriage; and (c) discussing a mutually agreed upon pleasant topic. Each conversation was preceded by a five-minute silent period. For this article, only data from the problem area discussion were used.

1987 Followup

In 1987, 4 years after the initial assessment, the original subjects were recontacted and at least one spouse (70 husbands, 72 wives) from 73 of the original 79 couples (92.4%) agreed to participate in the followup.

Second Interaction Session

Of the original 79 couples, we were able to recruit 42 couples to return to the laboratory for another laboratory interaction. We designed the recruitment of our subjects so that we would sample couples across a wide range of marital satisfaction. Couples who returned to the laboratory had two conversations: (a) the "events of the last 4 years," and (b) the conflict conversation. For this interaction, we followed the same procedures we had used 4 years ago, in which spouses discussed the major area of continuing disagreement in their marriage.

Observational Coding

Coding emotional expression: The videotapes of the problem area interaction were coded using an observational coding system, the Specific Affect Coding System (SPAFF; Gottman, 1996), which provided information on specific affects. Reliability was computed using a one-second window on either side of a code's occurrence and

checking to see if the other coder had detected this code within this window. Cohen's κ s for the affect wheel SPAFF coding averaged .85 for the entire recoding. Time-1 and Time-2 video tapes were mixed together for this coding and, except for reliability checking, each observer coded only one tape of a couple. Observers were unaware that they were coding videotapes of couples made 4 years apart.

RESULTS

Overall Affect Stability

There was a significant correlation between overall emotionality (total positive and negative affect) across the two time points for husbands (.36, $p < .05$) and for wives (.55, $p < .001$). For total positive affect for husbands the correlation was .46, $p < .01$, and for wives the correlation was .76, $p < .001$. For total negative affect for husbands the correlation was .35, $p < .05$, and for wives the correlation was .60, $p < .001$.

Stability of Specific Affects

Husbands

There was no husband disgust coded at Time-2, because it did not occur, so this variable was omitted for husbands from all analyses. Husband belligerence, domineering, contempt, tension/fear were highly stable over 4 years. Husband defensiveness showed significant stability, but at a lower level. Sadness and whining for husbands showed no significant stability across years. For the positive affects, husband listener backchannels and husband humor were stable. (See Table for a summary of correlations across specific affects.)

Wives

As with husbands, wife domineering, contempt, and defensiveness were stable

TABLE
Stability Correlations for Codes of Emotional Behavior, Number of Seconds in 15 Minutes in Each Affect, Across 4 Years. The z Is the Normally Distributed Score Fisher's r -to- z Test for Correlations

Variable	Husband	Wife	z
Negative Affects			
Anger	.21	-.02	1.19
Belligerence	.64***	.11	4.06***
Domineering	.55***	.30*	1.94
Contempt	.76***	.46**	3.12**
Disgust	—	-.04	—
Tension/Fear	.54***	.09	3.19**
Defensiveness	.30*	.53***	1.75
Stonewalling	-.03	.13	.63
Whining	.02	.50***	3.31**
Sadness	-.05	-.05	.00
Positive Affects			
Interest	.02	.04	.13
Listener backchannels	.47***	.60***	1.13
Affection	-.10	-.09	.06
Humor	.52***	.49***	.25
Joy/Excitement	—	-.06	—

* $p < .05$; ** $p < .01$; *** $p < .001$

over 4 years, but, unlike husbands, tension/fear was not stable. Additionally, wife whining was also highly stable across years. For the positive affects, wife listener backchannels and wife humor were again stable.

Gender Differences

The Table also summarizes the Fisher's r to z test for correlations (Hays, 1963, pp. 530-533). Husbands and wives differed in stability as follows: for belligerence, contempt, and tension/fear, husbands were more stable over time than wives; for whining, wives were more stable over time than husbands. Not reported in the Table is the finding that, in the stability of overall emotionality, the z ratio was 1.50, ns. In the stability of positive affect, women were more stable than men, $z = 3.12$, $p < .01$. In the stability of negative

affect, women were again more stable than men, $z = 2.05, p < .05$.

DISCUSSION

These results support the conclusion that overall affectivity, the amount of positive and negative affect, and specific affects in marital interaction show considerable stability over the non-normative, relatively long period of 4 years. This was particularly true for the overall level of emotionality, and for positive and negative affect.

While this study did not involve a consistent developmental transition, most couples in this study were in their early thirties, and most couples went through major life transitions in the period between assessments. Many became parents, finished school, started or changed careers, changed geographical location, and so on.

Consistent with the data, our impression in watching the videotapes was that, in all but a very few cases, the Time-1 and Time-2 conversations seemed remarkably similar. Often the very same issues were discussed at Time-1 and Time-2, and in the same way.

The gender differences in stability were interesting. Women's affects during marital conflict (both positive and negative) were significantly more stable than men's affects during marital conflict. In terms of specific affects, stereotypically, the domain of anger, and vigilance as well as humor have been considered particularly male emotions (see Panksepp, 1998), so one would expect stability in these affects for men, while affection and sadness have been considered particularly female emotions, so one would expect stability in these affects for women. However, research has not usually borne out these stereotypes. For example, Averill's (1982)

diary study on anger found very few gender differences in daily reports of anger.

However, gender differences in these emotions have not been studied in the context of marital interaction. It was interesting, then, in accordance with stereotypes, that our study showed belligerence, domineering, contempt and tension/fear as particularly stable for husbands but not for wives, while whining was stable for wives and not for husbands. Defensiveness, listener backchannels, and humor were stable for both husbands and wives.

For future investigations, as a clinical observation we note that at neither time point was there much evidence of a resolution of the couple's major problems. Most of the time people appeared to be talking at both time points about the same issue. We got the impression that most marital issues could be called "perpetual issues" that were never reconciled. These issues usually concerned fundamental differences between them (for example, she is much more social than he is). In a post hoc coding of the content of these issues, we found that couples were discussing the same type of issue 69% of the time, and new issues only 31% of the time. Wile (1988) presaged these observations when he wrote:

Each potential relationship has its own set of inescapable recurring problems. . . There is value, when choosing a long-term partner, in realizing that you will inevitably be choosing a particular set of unresolvable problems that you'll be grappling with for the next ten, twenty, or fifty years. [pp. 12-13]

As the quantitative data show, clinically we were also struck by the *similarity in patterns of marital interaction*. That is, we would conclude that, primarily, *people tend to talk about the same types of marital issues in the same ways*.

However, we noticed that in discussing

these perpetual issues some couples had a great deal of negative and no positive affect, while others consistently had more positive affect. That is, some couples seemed almost amused by this familiar problem between them, and capable of high levels of listener backchannels, laughter, and affection, while others seemed hurt, sad, very angry, belligerent, and contemptuous, were low in listener backchannels, and also were without humor and affection. Thus, what seemed particularly salient to us in continuing marital conflict over time was not the degree of problem solving but, rather, the nature of the affective interaction around which most couples did *not* solve their perpetual problems. If this observation proves to be true, then the importance of problem solving may have been over-emphasized in marital research.

REFERENCES

- Averill, J.R. (1982). *Anger and aggression*. New York: Springer-Verlag.
- Belsky, J., Spanier, G.B., & Rovine, M. (1983). Stability and change in marriage across the transition to parenthood. *Journal of Marriage and the Family* 45: 567-577.
- Booth, A., & White, L. (1980). Thinking about divorce. *Journal of Marriage and the Family* 42: 605-616.
- Buehlman, K., Gottman, J.M., & Katz, L. (1992). How a couple views their past predicts their future: Predicting divorce from an oral history interview. *Journal of Family Psychology* 5: 295-318.
- Burgess, E.W., Locke, H.J., & Thomas, M.M. (1971). *The family: From institution to companionship*. New York: American Books.
- Coan, J., Gottman, J.M., Babcock, J., & Jacobson, N.S. (1997). Battering and the male rejection of influence from women. *Aggressive Behavior* 23: 375-388.
- Deal, J.E., Hagan, M.S., & Anderson, E.R. (1992). IV. The marital relationship in remarried families (pp. 73-93). In E.M. Hetherington & W.G. Clingempeel (eds.), *Coping with marital transitions: A family systems perspective*. *Monographs of the Society for Research in Child Development* (Serial No. 227, 57, Nos. 2-3).
- Ekman, P., & Friesen, W.V. (1978). *Facial Action Coding System*. Palo Alto CA: Consulting Psychologists Press.
- Gottman, J.M. (1993). The roles of conflict engagement, escalation, or avoidance in marital interaction: A longitudinal view of five types of couples. *Journal of Consulting and Clinical Psychology* 61: 6-15.
- Gottman, J.M. (1994). *What predicts divorce?* Hillsdale NJ: Lawrence Erlbaum Associates.
- Gottman, J.M. (ed.). (1996). *What predicts divorce? The measures*. Hillsdale NJ: Lawrence Erlbaum Associates.
- Gottman, J.M., Coan, J., Carrere, S., & Swanson, C. (1998). Predicting marital happiness and stability from newlywed interactions. *Journal of Marriage and the Family* 60: 5-22.
- Gottman, J.M., & Levenson, R.W. (1992). Marital processes predictive of later dissolution: Behavior, physiology and health. *Journal of Personality and Social Psychology* 63: 221-233.
- Gottman, J.M., Markman, J., & Notarius, C.I. (1977). The topography of marital conflict: A sequential analysis of verbal and nonverbal behavior. *Journal of Marriage and the Family* 39: 461-477.
- Hays, W.L. (1963). *Statistics for psychologists*. New York: Holt, Rinehart, & Winston.
- Hetherington, E.M. (1996). Personal communication, January 15, 1996.
- Jacobson, N.S., Gottman, J.M., Gortner, E., Berns, S., & Shortt, J.W. (1996). Psychological factors in the longitudinal course of battering: When do the couples split up? When does the abuse decrease? *Violence and Victims* 11: 371-392.
- Levenson, R.W., & Gottman, J.M. (1983). Marital interaction: Physiological linkage and affective exchange. *Journal of Personality and Social Psychology* 45: 587-597.
- Levenson, R.W., & Gottman, J.M. (1985). Physiological and affective predictors of change in relationship satisfaction. *Journal of Personality and Social Psychology* 49: 85-94.
- Locke, H.J., & Wallace, K.M. (1959). Short-

term marital adjustment and prediction tests: Their reliability and validity. *Marriage and Family Living* 21: 251-255.

Matthews, L.S., Wickrama, K.A.S., & Conger, R.D. (1996). Predicting marital instability from spouse and observer reports of marital interaction. *Journal of Marriage and the Family* 58: 641-655.

Panksepp, J. (1998). *Affective neuroscience*. New York: Oxford University Press.

Raush, H.L., Barry, W.A., Hertel, R.K., & Swain, M.A. (1974). *Communication, conflict, and marriage*. San Francisco: Jossey-Bass.

Wile, D.B. (1988). *After the honeymoon*. New York: John Wiley & Sons.

Manuscript received January 12, 1999; accepted January 21, 1999.

FAMILY PROCESS

CD-ROM

36 Years on a single CD!

The Story of Family Therapy on a Single CD-ROM

**Close-out
Special Price
Vol.1-36**

- Full-Text
- Hyperlinked
- Fully-Searchable
- ~~\$199 individual; \$495 institutions~~
- \$ 99 individual; \$199 institutions

Name _____

Address _____

City _____ State _____ Postal Code _____ Country _____

Tel _____ Fax _____ E-mail _____

Credit Card Number _____ Exp Date _____

Check Signature _____

Family Process, P.O. Box 23980, Rochester, NY 14692-3980 USA
 Tel: 716-244-2770; Fax: 716-244-3942; E-mail: info@FamilyProcess.org
www.FamilyProcess.org