

The Roles of Conflict Engagement, Escalation, and Avoidance in Marital Interaction: A Longitudinal View of Five Types of Couples

John M. Gottman

Seventy-three couples were studied at 2 time points 4 years apart. A typology of 5 groups of couples is proposed on the basis of observational data of Time 1 resolution of conflict, specific affects, and affect sequences. Over the 4 years, the groups of couples differed significantly in serious considerations of divorce and in the frequency of divorce. There were 3 groups of stable couples: validators, volatiles, and avoiders, who could be distinguished from each other on problem-solving behavior, specific affects, and persuasion attempts. There were 2 groups of unstable couples: hostile and hostile/detached, who could be distinguished from each other on problem-solving behavior and on specific negative and positive affects. A balance theory of marriage is proposed, which explores the idea that 3 distinct adaptations exist for having a stable marriage.

There have been many previous attempts at marital typologies (e.g., Bell, 1975; Cuber & Harroff, 1965; Fitzpatrick, 1988; Margolin, 1988; Olson, 1981). Most of these classifications of marriages were not based on direct observation of how couples behaved, but rather they were based on self-report data concerning beliefs, life styles, or interaction patterns (Gottman, 1979). It would also be useful to have an external criterion validity test of a proposed classification system. This article proposes longitudinal stability of the marriage or divorce as the external validity criterion. To date, there have been only four prospective studies of divorce (Bentler & Newcomb, 1978; Block, Block, & Morrison, 1981; Constantine & Bahr, 1980; Kelly & Conley, 1987); these studies have produced weak and inconsistent results, and none have used interview or observational data.

In a previous report, Gottman and Levenson (1992) proposed a preliminary typology that divided married couples into two groups: a "regulated" group, whose interactive speaker behaviors during a 15-min conflict discussion were generally more positive than negative, and a "nonregulated" group, whose interactions were more positive than negative. The goal of this article is to extend this typology by considering additional behavioral data that have recently become available for the same sample. The behavior of the listener as well as the behavior of the speaker will be considered, as will the coding of affect. This article also attempts to combine quantitative methods of data analysis with admittedly more speculative clinical observations to suggest a typology of five groups of couples that differ in marital interaction patterns, in marital satisfaction at two time points, and in marital stability.

It would also be useful if a proposed typology were organized

around theoretical questions. The typology proposed here is organized around a behavioral balance theory of marriage, in which it is assumed that marriages function with a kind of set point that balances positivity with negativity. Balance theories of marriage have been implicit in marital research from two traditions, the behavioral tradition (Gottman, 1979; Wills, Weiss, & Patterson, 1974), and the behavior exchange tradition (Gottman et al., 1976; Thibaut & Kelley, 1959). The assumption in the proposed balance theory is that the set point makes a difference in predicting the future course of the marriage.

Method

*Subjects*¹

Seventy-nine couples were originally recruited in Bloomington, Indiana, using newspaper advertisements. A demographic summary is provided in Gottman and Levenson (1992).

Procedure

Interaction Session

Couples had three 15-min conversations: (a) events of the day, (b) conflict resolution (discussion of a problem area of continuing disagreement), and (c) pleasant topic.

Follow-Up

Four years after the initial assessment, the original 79 couples were recontacted, and at least one spouse (70 husbands and 72 wives) from 73 of the couples (92.4%) agreed to participate in the follow-up. Spouses completed a set of questionnaires assessing marital satisfaction and items relevant to possible marital dissolution. The two dichotomous variables, serious considerations of divorce in the 4 years since Time 1 and Time 2 and actual divorce, will serve as the external criterion variables in this article.

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Correspondence concerning this article should be addressed to John M. Gottman, Department of Psychology, NI-25, University of Washington, Seattle, Washington 98195.

¹ Data were derived from a collaborative study with Robert Levenson.

Coding and Analysis of the Data

The videotapes of the problem area interaction were coded using three observational coding systems: the Marital Interaction Coding System (MICS), which in this study was used to focus on persuasion attempts; the Rapid Couples Interaction Scoring System (RCISS), which focused on problem solving (both speaker and listener behaviors); and the Specific Affect Coding System (SPAFF), which focused on specific emotions. The RCISS provided the means for classifying couples into the initial groups.

Marital Interaction Coding System

The MICS (Weiss & Summers, 1983) was used in this study to obtain an estimate of attempts at persuasion used by the couples for each third of the 15-min conflict marital interaction; the sum of two MICS sub-codes, *disagreement plus criticism* (labeled *engagement* by Gottman & Krokoff, 1989), was used to provide a crude index of persuasion attempts.² MICS codes were assigned continuously by coders for 30-s blocks. Double codes, which are used with more recent versions of the MICS, were treated as additional single codes for this research. Means reported for the MICS are the total number of persuasion attempts in each 5-min block. A sample of every videotape was independently coded by another observer, and a confusion matrix was computed. The average weighted Cohen's kappa for this coding (all subcodes of the MICS summed over all couples) was 0.60.

Specific Affect Coding System

For greater description of the affective portion of the interactions beyond the positive and negative dimensions, the SPAFF (Gottman & Krokoff, 1989) was used. Coders classified each turn at speech as affectively neutral, as one of five negative affects (*anger, disgust/contempt, sadness, fear, or whining*), or as one of four positive affects (*affection/caring, humor, interest/curiosity, or joy/enthusiasm*). The kappa coefficient of reliability, controlling for chance agreements, was equal to 0.75 for the entire SPAFF coding.

SPAFF Sequential Analyses

SPAFF codes were also lumped into positive, negative, and neutral affect, and *z* scores were computed (see Allison & Liker, 1982; Gottman & Roy, 1991) for six sequences: (a) two (one for husband to wife and one for wife to husband) *startup* sequences (Patterson, 1982), or the transition from one partner's neutral affect to the other partner's negative affect; (b) two *continuance* sequences (Patterson, 1982), or the transition from one partner's negative affect to the other partner's negative affect; and (c) two *positive reciprocity* sequences (Gottman, 1979), or the transition from one partner's positive affect to the other partner's negative affect.

Rapid Couples Interaction Scoring System

The RCISS uses a verbatim transcript of the videotape and the actual videotape. A checklist of 13 behaviors are scored for the speaker and 9 behaviors are scored for the listener on each turn at speech (for more detail, see Krokoff, Gottman, & Hass, 1989). RCISS behavioral codes can be scored in terms of underlying positive-negative dimension. The data are coded each turn at speech and later summarized into the following scales: (a) *complain/criticize*; (b) *defensiveness*; (c) *contempt*; (d) *stonewalling*, a set of behaviors that describe the listener's withdrawal and disengagement from the interaction (e.g., not looking at the speaker, no facial movement, no vocal responses showing the speaker that the listener is tracking the speaker); (e) *positive presenta-*

tion of issues; (f) *assent*, including simple agreements and positive vocal listener backchannels; (g) *humor*; and (h) *positive listener*, a set of behaviors that are the opposite of stonewalling and that suggest an engaged and positive listener. We also computed, for each spouse, the overall speaker slopes for the variable (i) *positive - negative*. Using Cohen's kappa, reliability for all RCISS codes was 0.72. Because of the checklist nature of this system, codes are independent of one another in the coding process.

Using RCISS Point Graphs to Classify Couples

RCISS speaker and listener codes were used to classify couples into a 2×2 factorial design. This classification scheme was based on a method proposed originally by Gottman (1979) for use with the Couples Interaction Scoring System, a predecessor of the RCISS. On each conversational turn, the total number of positive RCISS items minus the total number of negative items coded was computed for each spouse. Then the cumulative total of these points was plotted for each spouse. The slopes of these plots were determined using linear regression analysis. Gottman (1979) found that speaker slopes were related to marital distress or satisfaction; distressed or dissatisfied couples had more negative speaker slopes; the listener's behavior was not studied. In the present study, four groups were defined as shown in Figure 1. The initial experimental design of this article and the *Ns* thus derived are shown in Figure 1. Figure 1 represents the first step in forming the typology. The following analyses of SPAFF variables will make a case for the summary names given to couples in Figure 1.

Results

Typology and Marital Stability

The following results will justify the summary terms *stable* and *unstable* to the right of the two rows in Figure 1.

Serious Considerations of Divorce

For the dichotomous variables of serious considerations of divorce in the 4 years between Time 1 and Time 2 and the divorce variable, a series of chi-square tests were performed for both main and interaction effects of listener and speaker slopes. For the husbands' serious considerations of divorce, there was a significant main effect for speaker slope, $\chi^2(1, N = 73) = 7.75, p < .01$; no significant effect for listener slope, $\chi^2(1, N = 73) = 0.01, ns$; and a significant interaction effect, $\chi^2(3, N = 73) = 8.50, p < .05$. Among positive speaker slope couples,

² This interpretation of the sum of the MICS criticism and disagreement codes has yet to be fully tested. As a beginning attempt at validating the meaning of this MICS summary code, in a separate study with 56 couples, these MICS codes were correlated with belligerent persuasion attempts measured with the SPAFF; domineering and belligerent persuasion attempts were summed across spouses. The MICS summary code husband engagement correlated 0.54, $p < .001$, with belligerent persuasion attempts, and the MICS summary code husband engagement correlated 0.45, $p < .001$, with belligerent persuasion attempts; they did not correlate significantly with domineering persuasion attempts (husband engagement correlation = 0.02, wife engagement correlation = -0.01). Also, the MICS engagement summary codes were not measuring general negativity because they did not correlate with other negative affect codes, such as defensiveness, whining, or sadness.

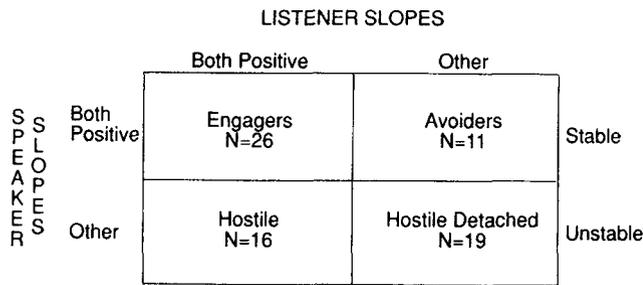


Figure 1. Design of the study as a function of listener and speaker cumulative point graph slopes.

husbands were significantly less likely to seriously consider divorce than negative speaker sloped husbands (18% vs. 52%); for wives the percentages were 33% and 48%, respectively. Individual cells of a contingency table can be examined statistically to test which cells contribute to the effect (Bishop, Fienberg, & Holland, 1975). The cells contributing significantly to the interaction effect showed that when the listeners are engaged there is a bigger difference between whether the speaker is positive or not in terms of the husband's serious considerations of divorce, when the listeners were engaged (60% of nonpositive speaker slope husbands seriously considered divorce, compared with 17% of positive speaker slope couples). For the wives' serious considerations of divorce, none of the effects were significant: speaker slope, $\chi^2(1, N = 73) = 1.50$; listener slope, $\chi^2(1, N = 73) = 0.28$; and interaction, $\chi^2(3, N = 73) = 1.20$.

Actual Divorce

For the divorce variable, there was a significant main effect for speaker slope, $\chi^2(1, N = 73) = 4.37, p < .05$; no significant effect for listener slope, $\chi^2(1, N = 73) = 0.72, ns$; and no significant interaction effect, $\chi^2(3, N = 73) = 4.10, ns$. Couples who had positively sloped speaker point graphs at Time 1 were significantly less likely to divorce in the intervening 4 years than other couples (3% vs. 19%).

Description of Marital Processes

The following results will justify the terms *engager*, *avoider*, *hostile*, and *hostile/detached* in the boxes of Figure 1. Table 1 summarizes the multivariate analyses of variance (MANOVAs) and analyses of variance (ANOVAs) for the SPAFF variables for the 2×2 design. RCISS subscales are not analyzed here to avoid confound with the couples' classification scheme itself. Comparisons between groups were performed using two-tailed *t* tests between groups.

Stable and Unstable Couples and Hostility

There is support for the contention that unstable couples at Time 1 could be described as more hostile than stable couples. Husbands in stable couples displayed more affection ($M = 3.00$ vs. 1.55), were less angry ($M = 12.72$ vs. 24.48), and whined less ($M = 1.28$ vs. 1.55). Wives in stable couples showed more interest ($M = 13.39$ vs. 6.61), more joy ($M = 1.31$ vs. .24), and less

anger ($M = 15.19$ vs. 29.48). The listener main effects could be interpreted as a manipulation check on the RCISS listener dichotomy: There were significant listener slope main effects for husband interest ($M = 12.00$ vs. 6.18) and wife interest ($M = 12.90$ vs. 6.11). There were also significant interaction effects between speaker and listener slope for husband and wife disgust; surprisingly, husbands who were positive speakers and listeners showed the highest levels of disgust. There were no significant main effects or interaction effects for the sequences.

Engagers Versus Avoiders

Although stable couples were more positive and less negative than unstable couples, there are some systematic differences between the groups labeled *engagers* and *avoiders* in Figure 1. Because avoiders and engagers differed only on RCISS listener

Table 1
SPAFF Codes as a Function of Speaker Slope (G), Listener Slope (L), and Their Interaction (G \times L)

Effect	G	L	G \times L
<i>Husband positive</i>			
Multivariate ^a	1.10	3.05*	0.81
Univariate			
Neutral	0.02	0.06	1.51
Humor	1.24	1.86	0.24
Affection	4.64*	2.35	0.49
Interest	2.15	5.70*	0.30
Joy	1.58	1.40	0.03
<i>Husband negative</i>			
Multivariate ^b	2.66*	1.01	1.58
Univariate			
Anger	4.33*	0.31	3.69
Disgust	0.01	0.02	7.56**
Whining	4.99*	0.71	0.00
Sadness	0.02	0.72	0.03
Fear	2.17	2.78	0.54
<i>Wife positive</i>			
Multivariate ^a	2.76*	1.81	1.01
Univariate			
Neutral	1.73	0.08	2.01
Humor	2.34	2.96	0.02
Affection	3.73	0.78	1.86
Interest	5.18*	4.95*	0.32
Joy	7.60**	0.89	0.88
<i>Wife negative</i>			
Multivariate ^b	2.98*	0.62	2.25
Univariate			
Anger	6.72*	0.40	2.89
Disgust	2.73	0.05	7.62**
Whining	1.82	0.29	1.93
Sadness	0.92	0.09	0.31
Fear	1.76	1.78	0.61

Note. SPAFF = Specific Affect Coding System.

^a Multivariate *dfs* = (3, 66); univariate *dfs* = (1, 68). ^b Multivariate *dfs* = (5, 61); univariate *dfs* = (1, 65).

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

behavior, RCISS speaker codes and affects were examined by comparing engagers and avoiders. For the RCISS, engagers significantly exceeded avoiders on both husband's and wife's complain/criticize score: husband, $t(27) = 3.08, p < .01$, engager $M = 0.12$, avoider $M = 0.01$; wife, $t(28) = 3.28, p < .01$, engager $M = 0.12$, avoider $M = 0.02$; as well as on positive agenda building: husband, $t(35) = 2.57, p < .05$, engager $M = 0.70$, avoider $M = 0.49$; wife, $t(35) = 2.11, p < .05$, engager $M = 0.68$, avoider $M = 0.52$. Hence, both in positive and in negative presentation of issues, engagers exceeded avoiders. Combined with the fact that avoiders show greater listener withdrawal, there is justification for the contention that the upper left-hand cell should be called *conflict engagers* and the upper right-hand cell should be called *conflict avoiders*. For the SPAFF variables, engager husbands showed more disgust and contempt than avoiders, $t(33) = 2.19, p < .05$, engager $M = 8.00$, avoider $M = 2.45$, whereas engager wives showed more disgust and contempt, $t(30) = 2.34, p < .05$, engager $M = 5.68$, avoider $M = 1.45$, and engager husbands whined more, $t(32) = 2.20, p < .05$, engager $M = 5.08$, avoider $M = 1.45$, than avoider wives. For the sequences, engagers were higher than avoiders on negative continuance, husband to wife, $t(33) = 2.08, p < .05$, engager $M = 6.11$, avoider $M = 3.77$; wife to husband, $t(33) = 2.26, p < .05$, engager $M = 6.42$, avoider $M = 3.69$, and on positive reciprocity, wife to husband, $t(29) = 2.24, p < .05$, engager $M = 4.90$, avoider $M = 2.56$. Engagers were more likely to reciprocate both positive and negative affect than avoiders.

Hostile Versus Hostile/Detached Couples

The *detached* in the label *hostile/detached* is warranted by the fact that hostile detached couples are far less engaged as listeners. However, are there differences between groups in speaker behavior? Again, because one axis of the design is based on listener behavior, only RCISS speaker codes and affects were examined in comparing hostile and hostile/detached couples. There was evidence that hostile/detached couples were more negative and less positive than hostile couples. On the RCISS, hostile/detached husbands showed more verbal contempt, $t(22) = 3.06, p < .01$, hostile $M = 0.04$, hostile/detached $M = 0.15$, and less positive agenda building, $t(33) = 2.95, p < .01$, hostile $M = 0.58$, hostile/detached $M = 0.33$, whereas hostile/detached wives showed more verbal contempt, $t(23) = -2.46, p < .05$, hostile $M = 0.06$, hostile/detached $M = 0.21$. On the SPAFF, hostile/detached husbands showed less interest, $t(33) = 3.01, p < .01$, and more disgust, $t(33) = 2.73, p < .01$, than hostile husbands; hostile/detached wives also showed less interest, $t(33) = 2.80, p < .01$, and more disgust, $t(33) = 2.46, p < .01$, than hostile husbands. There were no significant differences between hostile and hostile/detached couples for any of the sequences.

Two Types of Conflict Engagers

The high means for husband and wife disgust for the positive-engaged cell of the design were quite unexpected and puzzling and led to a review of the videotapes for the couples in this cell. On the basis of clinical intuitions in viewing the videotapes, without benefit of an additional coding system, there appeared

to be two distinct types of couples in this cell, who differed in terms of how emotional they were. This observation led to a division of the couples in the engager cell at the cell's median for husband plus wife SPAFF neutral affect, which produced the final experimental design shown in Figure 2.

Comparing volatile and validating couples. Because these two groups were classified in the same cell of the design using the RCISS speaker and listener slopes, I would not expect them to differ on RCISS subscales. Hence, a comparison of groups using RCISS subscales is unconfounded. On the RCISS, volatile husbands were significantly greater than validating husbands in positive agenda building, $t(18) = 4.19, p < .001$, volatile $M = 0.84$, validating $M = 0.57$; they smiled and laughed more, $t(24) = 2.25, p < .05$, volatile $M = 0.19$, validating $M = 0.10$; but assented less, $t(20) = -3.40, p < .01$, volatile $M = 0.06$, validating $M = 0.20$; and were less engaged listeners, $t(15) = -2.89, p < .05$, volatile $M = 1.69$, validating $M = 2.39$. Volatile wives were more defensive, $t(24) = 2.77, p < .05$, volatile $M = 0.25$, validating $M = 0.14$; assented less, $t(16) = -3.60, p < .01$, volatile $M = 0.04$, validating $M = 0.21$; were greater on positive agenda building, $t(19) = 3.51, p < .01$, volatile $M = 0.81$, validating $M = 0.57$; smiled and laughed more, $t(24) = 2.25, p < .05$, volatile $M = 0.18$, validating $M = 0.10$; and were less engaged listeners, $t(15) = -2.13, p < .001$, volatile $M = 1.95$, validating $M = 2.58$. On the SPAFF, volatile husbands displayed more tension, $t(15) = 3.10, p < .01$, volatile $M = 40.33$, validating $M = 9.46$, whereas wives displayed more anger, $t(16) = 2.42, p < .05$, volatile $M = 26.58$, validating $M = 8.23$; more tension, $t(13) = 4.18, p < .001$, volatile $M = 39.00$, validating $M = 8.00$; and more joy, $t(13) = 2.55, p < .05$, volatile $M = 0.84$, validating $M = 0.57$. Volatile couples were higher than validators on negative continuance, husband to wife, $t(14) = 3.03, p < .01$, volatile $M = 8.99$, validating $M = 3.69$; wife to husband, $t(15) = 2.88, p < .05$, volatile $M = 9.15$, validating $M = 4.11$; and on positive reciprocity, husband to wife, $t(22) = 3.14, p < .01$, volatile $M = 7.34$, validating $M = 2.89$; wife to husband, $t(22) = 2.21, p < .05$, volatile $M = 6.59$, validating $M = 3.47$. Volatile couples were both more positive and more negative than validating couples.

Discussion. Gottman (1979) divided each conflictual marital interaction into thirds. In general, there were three distinct phases to a conflict discussion. The first phase was agenda building, in which among happily married couples both people tended to present their views and feelings on a problem; the

		LISTENER SLOPES		
		Both Positive	Other	
S P E A K E R S	Both Positive	Volatile (12) Validator (14)	Avoiders N=11	Stable
	Other	Hostile N=16	Hostile Detached N=19	Unstable

Figure 2. Final design of the typology, showing five groups of couples, three stable couples (volatile, validating, and avoiding), and two unstable couples (hostile and hostile/detached).

second phase was the arguing phase, in which both people usually tried to persuade one another; the third phase was the negotiation phase, in which compromise was the apparent goal. It is useful to consider the findings in terms of these phases.

For the conflict avoider couples (who were also low in emotion), the interviewer had a great deal of difficulty setting up the conflict discussion. Although conflict avoiders did not describe themselves as avoidant of conflict, these couples did not have specific strategies for resolving conflict. For example, they often referred to the passage of time alone as solving problems, and to working things out alone. One wife said, "Well, Jim says he just likes to let things go and 'go with the flow' and just let problems work themselves out and that problems usually work themselves out without a lot of deep discussion about it." When avoiding couples refer to "talking things out" there is an emphasis on common ground rather than on differences, an acceptance of differences and disagreements as just not very important, so that they can be ignored. The interactions are not psychologically minded or introspective. Once each person has stated his or her case, they tend to see the discussion as close to an end. They consider accepting these differences as a complete discussion. Once they understand their differences, they feel that the common ground and values they share overwhelm these differences and make them unimportant and easy to accept. Hence, there is very little give and take and little attempt to persuade one another. The discussion has very little emotion, either positive or negative. Often the proposed solutions to issues are quite nonspecific.

On the other hand, for engagers, it was quite easy for the interviewer to set up the conflict discussion. These couples confronted conflict openly, disagreed, and tried to persuade one another. For volatile couples, there was a high level of both positive and negative affect in these marriages. The husbands were extremely expressive and involved. There was a great deal of negativity in these interactions, and also a lot of humor and affection. There seems to be a premium placed on arguing in these couples, apparently in the service of preserving their individuality and separateness. What appears to be characteristic of these couples is that the usual persuasion part of the discussion comes very early, and it pervades the entire discussion, even in the early agenda building phase when feelings are usually being expressed (Gottman, 1979). As a result there are many communications that say, in effect, "Your feelings are wrong." For example, a wife may express her concern about the family budget, saying that she thinks that they do not save enough. The volatile husband may respond by saying something like, "You are wrong. We do not have a problem with finances." Then the persuasion begins, but it surrounds her expression of feelings.

Validating couples, who were intermediate in expressing emotion, had conversations that involved conflict, but there was a lot of ease and calm in the discussion. The conversation was initially characterized by one spouse validating the other's description of a problem. Validation can be as minimal as vocal listener backchannels such as "mmhmm" and "yeah." When listening to this interaction, it does not necessarily seem that the validating husband is in agreement with his wife but is simply saying, "OK, go on, I'm interested and I'm listening to your feelings. I may have my own point of view on this issue,

but I want to hear you out." That is sufficient to count as validation. At a more extreme level, the validating spouse provides support, perhaps empathy for the partner's feelings, communicating that he or she understands expressed feelings, that it makes sense for the partner to feel that way, given his or her position and vantage point. The validator still may not feel the way the partner does, but he or she communicates, verbally or nonverbally, that he or she understands and accepts the expressed feelings as valid. This communication can be nonverbal, as in mirroring facial expressions of worry and distress, or it can be direct and verbal. In the conversation of validating couples, there is often the sense that, although there is disagreement between them, they are both working together on a problem. However, in the disagreement part of the interaction there is a great deal of belligerent argument by each person for his or her position.

The conversations of unstable couples were quite negative. For example, the conversations of hostile couples were characterized not only by a great deal of direct engagement in conflict and an attentive listener but also by defensiveness, usually on the part of both people. One sequence that indexes defensiveness is the mindreading to disagreement sequence. In this sequence, one person attributes a motive, feeling, or behavior to the other person. At times this statement is accompanied by a "you always" or "you never" phrase, and it usually has a negative voice tone or facial expression that gives the mindreading a blaming or judgmental quality. For example, one person may say, "You never clean up the house. You just don't care how we live!" This will be followed by disagreement and elaboration, such as, "I do so clean up a lot. Just the other day I straightened the house before your mother came over!" Hostile/detached couples were detached and emotionally uninvolved with one another, but they got into brief episodes of reciprocated attack and defensiveness, often ostensibly about trivial matters.

Hypothesis to be tested. On the basis of these observations, one would predict that three stable groups would differ by the amount and timing of persuasion attempts. This hypothesis will now be spelled out.

Discriminating Among Types of Stable Marriages

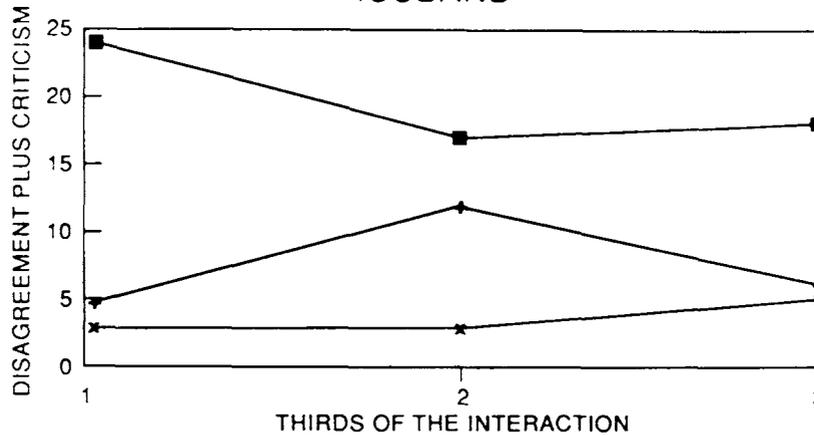
For each 5 min of the interaction, the amount of conflict engagement, which is the sum of disagree and criticize codes on the MICS, was computed. Because persuasion episodes were relatively rare within couples, data were combined across couples and subjected to log-linear analysis. If the clinical observations are correct about the three groups of couples, the following pattern should be observed. The volatile couples should be highest in persuasion attempts, and these attempts should begin at the start, in the agenda-building phase. What this means is that the spouses are trying to persuade each other even at the stage of expressing feelings. Volatile couples then are expected to continue their persuasion attempts unabated throughout all parts of the interaction. The shape of their curve should be a straight line, at a higher elevation than the other two groups. Validating couples are expected to listen to one another in the agenda-building stage and to validate feelings with agreement or assent, so that their persuasion attempts should be high only

in the middle third, or arguing phase, of the discussion. Validating couples are also expected to compromise and negotiate in the final third of the interaction. Hence, the amount of persuasion should fall for this group, and it ought to have an inverted-V shape. Avoiders are expected to avoid persuasion attempts throughout the interaction, so their curve should be at a low level, and it should be flat throughout the interaction. Figure 3 is a summary of the results. This figure, by visual inspection, does follow the predictions made. Essentially the same pattern of results held for husbands and for wives. If I examine the proportion of persuasion attempts in each phase of the discussion, validators and volatile couples showed essentially no gender differences across the three phases of the discussion. However, avoiders did show a gender difference. Most of the persuasion attempts by avoiding wives were in the first third,

whereas most of the persuasion attempts of avoiding husbands were in the last third.

A log-linear analysis of the data in Figure 3 was performed. The statistical tests are likelihood ratio chi-square tests for main effects and interactions and specific contrasts (see Gottman & Roy, 1991). There was a statistically significant effect for groups, $\chi^2(2, N = 73) = 65.44, p < .001$; a statistically significant effect for gender, $\chi^2(1, N = 73) = 4.26, p < .05$; but no significant effect by thirds, $\chi^2(2, N = 73) = 2.41, ns$. The Group \times Thirds interaction was statistically significant, $\chi^2(2, N = 73) = 19.20, p < .001$. Next, consider the data separately by spouse for each third of the interaction. I used contrasts (see Gottman & Roy, 1991). In the first third, persuasion attempts for volatile husbands were significantly greater than those for validating husbands ($z = 3.19$), and volatile husbands were

INDEX OF PERSUASION ATTEMPTS HUSBAND



WIFE

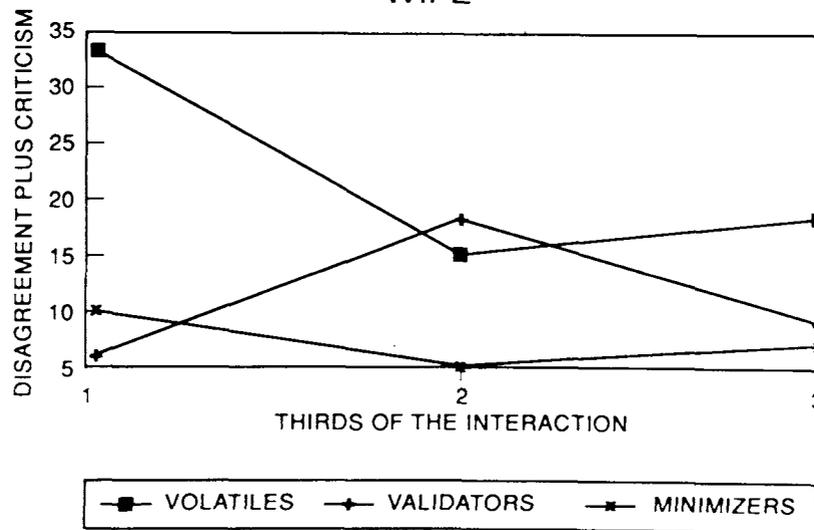


Figure 3. Graphs of Persuasion \times Time differences across the three stable types of couples. (Top panel = husband's data; bottom panel = wife's data.)

greater than avoiders ($z = 3.41$), but avoiders and validators were not significantly different ($z = 0.73$). In the second third, persuasion attempts for volatile husbands were not significantly greater than those for validating husbands ($z = .92$), volatile husbands were greater than avoiders ($z = 2.78$), and validators significantly exceeded avoiders ($z = 2.15$). In the final third, volatile husbands were significantly greater than validating husbands ($z = 2.29$), and volatile husbands were greater than avoiders ($z = 2.51$), but avoiders and validators were not significantly different ($z = 0.29$). For wives, in the first third, volatile wives were significantly greater than validating wives ($z = 3.82$), and volatile wives were greater than avoiders ($z = 3.33$), but avoiders and validators were not significantly different ($z = 1.14$). In the second third, volatile wives were not significantly different than validating wives ($z = .50$), volatile wives were greater than avoiders ($z = 2.14$), and validators also exceeded avoiders ($z = 2.51$). In the final third, volatile wives were significantly greater than validating wives ($z = 2.10$), volatile wives were not significantly different from avoiders ($z = 1.70$), and neither were avoiders and validators significantly different ($z = 0.48$).

A Balance Theory of Marriage

The classifications in this article are based on the relative balance of positive and negative speaker and listener behaviors. It is possible that the three types of stable couples described represent the entire range of adaptations that exist to balancing or regulating positive and negative behaviors in a marriage. If this were the case, then other adaptations would prove to be unstable longitudinally. Let us examine the nature of the three stable adaptations to balancing negativity and positivity. In the volatile case, the adaptation includes a lot of negativity. This tends to be balanced by a lot of laughter, positive presentation of issues, and a passionate, romantic marriage. This is the adaptation with a lot of nonneutral affect. There are two other adaptations that involve much less negative and positive affect and much more neutral interaction. One adaptation, represented by the validators, involves carefully picking and choosing when to disagree and confront conflict and then conveying some measure of support when one's partner expresses negative feelings about an issue. The other adaptation with high levels of neutral affect is the avoider adaptation. It appears to involve a minimization of the importance of disagreement. It results in a good deal of calm interaction, but pays the price with emotional distance in the marriage. We may think of these three adaptations as balancing some quantity of positivity against negativity.

Test of the balance theory. Using only RCISS codes, all husband and wife positive speaker codes and all husband and wife negative speaker codes were separately summed, and the ratio was computed. The statistical comparison between stable and unstable couples resulted in $F(1, 68) = 29.20, p < .001$: Whether comparing stable and unstable husbands, $F(1, 68) = 19.51, p < .001$, or comparing wives, $F(1, 68) = 24.69, p < .001$, the results were significant. For husbands across all three stable groups, the ratio was 5.10; for wives the ratio was 5.06. For husbands in unstable marriages, the mean ratio was 1.06; for wives, the ratio was 0.67. There was no significant difference in the ratio be-

tween stable couples, for husbands, $F(2, 32) = 0.39$, and for wives, $F(2, 32) = 0.40$.

Extensions into affect. These balance theory results have been specific to one observational coding system, the RCISS. The RCISS is a combination of both problem solving and affect. There are two interesting questions one may ask. First, would the results hold if only affect were examined with the SPAFF? Second, an advantage of the SPAFF is that all three marital interactions can be examined. Would the results obtained hold for interactions other than conflict resolution? Is there evidence for some other constant in these contexts? Or would roughly the same constant be obtained? To answer the first question, the ratio of positive to negative SPAFF affects for the conflict interaction was computed.³ There were again no significant differences between types of couples within the stable group; for husbands, $F(2, 32) = 0.39$, and for wives, $F(2, 32) = 0.40$. However, again according to prediction, the ratio discriminated stable from unstable couples on the conflict interaction; for husbands, $F(1, 64) = 7.93, p < .01$; for wives, $F(1, 64) = 6.16, p < .05$. Furthermore, the mean for stable husbands was 4.16, and that for unstable husbands was 0.91; the mean for stable wives was 5.26, and that for unstable wives was 0.46. Hence, on the conflict interaction this constant held as characteristic of stable couples when only pure affect was considered, as measured by the SPAFF.

To answer the second question, the same ratio was computed for the events of the day interaction and for the positive interaction. On the events conversation, again the husband ratio did not discriminate among stable types, and the same was true for the wife ratio: For husbands, $F(2, 21) = 0.37, ns$; for wives, $F(2, 27) = 0.22, ns$. However, again as predicted, the ratios did discriminate stable from unstable couples. For husbands, the mean for stable couples was 4.16 and the mean for unstable couples was 0.91, $F(1, 64) = 7.93, p < .01$. For wives, the mean for stable couples was 5.26 and the mean for unstable couples was 0.46, $F(1, 67) = 6.16, p < .05$. Again, the constant of nearly 5.0 was obtained as the ratio of positive to negative affects for stable couples on the events of the day conversation, and a ratio of less than 1.0 was obtained for unstable couples. In the positive conversation, once again the ratio did not discriminate among stable subtypes. For husbands, the ratio was not significantly different across the groups, $F(2, 22) = 0.68, ns$, as was the case for wives, $F(2, 24) = 0.58, ns$. Once again, the ratio did discriminate between stable and unstable subtypes, for both husbands and wives: For husbands, $F(1, 64) = 7.93, p < .01$, and for wives, $F(1, 67) = 6.16, p < .05$. The mean for stable husbands was 4.16, and for unstable husbands the mean was 0.91. The mean for stable wives was 5.26, whereas the mean for unstable wives was 0.46. During conflict, the wives in the hostile group had a higher ratio of positive to negative affects than wives in the hostile/detached group (0.73 compared with 0.20; the F ratios

³ These computations do not include the affects of fear, tension, and worry. Hence, the ratio is (humor + affection + interest + joy) divided by (anger + disgust/contempt + whining + sadness). The reason for excluding the fear code is that we have noticed that the combined fear, tension, and worry code of the SPAFF acts inconsistently as a negative affect.

for the conflict conversation were, for wives, $F(1, 31) = 10.03$, $p < .003$, and for husbands, $F(1, 29) = 0.95$, ns .

Summary: Toward an ecology of behavior. The results can be summarized with contour graphs that display all five groups on one graph and show the degree of separation achievable with some of the measures. Figure 4 (left panel) is an illustration of a standard predator-prey diagram showing that what is called a *stable limit cycle* is actually composed of regions of changing predator and prey populations. Region A is one in which both populations are low and the population of the predator decreases because of lack of food, while the population of the prey increases because of the lack of predation. In Region B, there are lots of small fish but relatively few predators, and hence both populations can increase; this is shown by the direction of the vector B. In Region C, both populations are large, and the big fish are multiplying, which results in a reduction of the number of small fish. In Region D, there are few small fish and many larger fish, and both populations must decline.

The figure explains how one obtains a closed loop, or *limit cycle*, in this manner. Figure 4 (right panel) shows a predator-prey model illustrating two stable limit cycles, one favoring the predator and one favoring the prey. To apply these plots to the data of this study, in our data the species population will be replaced by a behavior frequency. In our case, negativity is the predator and positivity is the prey. Figure 5 illustrates the predator-prey contour plots of positive and negative RCISS points for husbands and wives. Each point represents the husbands' or wives' data for one particular couple. The figure illustrates the five groups of couples; contours have been drawn to encircle each group. It is clear from this figure that for stable couples the limit cycle favors the prey (positivity), whereas for unstable couples the limit cycle favors the predator (negativity).

Discussion

There seems to be a rough constant that is invariant across each of the three types of stable couples. This constant, the ratio of positive to negative RCISS speaker codes during conflict resolution, is about 5, and it is not significantly different across the three types of stable marriages. The volatile couples reach the ratio of 5 by mixing a lot of positive affect with a lot of negative affect. The validators mix a moderate amount of posi-

tive affect with a moderate amount of negative affect. The avoiders mix a small amount of positive affect with a small amount of negative affect. Each group does so in a way that achieves roughly the same balance between positive and negative. I can speculate that each type of marriage has its risks, benefits, and costs. The volatile marriage tends to be quite romantic and passionate, but it has the risk of dissolving into endless bickering. The validating marriage (which is consistent with current models of marital therapy) is calmer and intimate; these couples appear to value a companionate marriage and shared experiences, not individuality. The risk may be that romance will disappear over time, and partners will become merely close friends. The third type avoids the pain of confrontation and conflict, but the risk may be emotional distance and loneliness. Is there any evidence that this typology will replicate across studies?

Models

Fitzpatrick's (1988) Typology

In a series of investigations, Fitzpatrick has made a case for the existence and replicability of three pure types of happily married couples. She called these three types *traditional*, *independents*, and *separates*. There is a remarkable convergence between Fitzpatrick's results on her three pure types and the three types of regulated couples I have identified. I need only to make the equation: validator = traditional, volatile = independent, and avoider = separate. In general, she found that traditional (validating) couples tend to avoid conflict but they will argue about the most important issues in their marriage; sex roles tend to be stereotyped. They both emphasize we-ness over individual goals and values. There is a high degree of sharing of space. They tend to have a regular daily schedule. Independents (volatiles) are quite different from traditional (validators). They believe that individuality should be emphasized and strengthened by the marriage. They believe that in a marriage each partner should be allowed privacy and independence. They thrive on conflict, and neither is openly afraid of expressing disagreement. There is little sex-role stereotypy. The marriage is supposed to be egalitarian, and they each see themselves as androgynous. They engage in conflict, bargaining, and negotia-

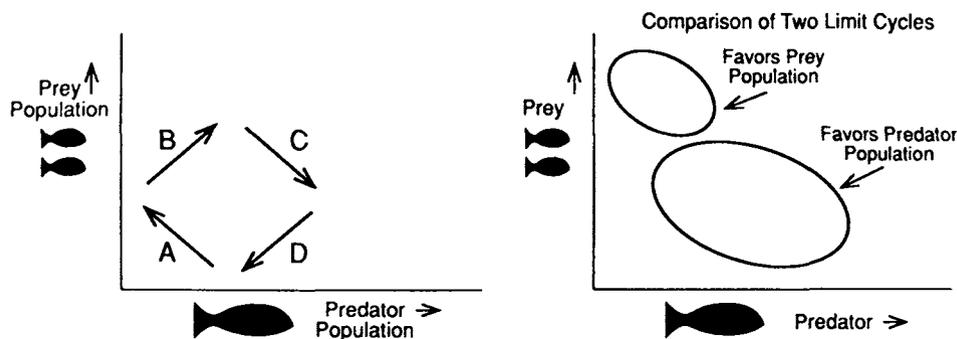


Figure 4. Predator-prey diagrams. (Left panel shows a stable limit cycle that is actually composed of regions of changing predator and prey populations. Right panel shows limit cycles, one favoring the predator and one favoring the prey.)

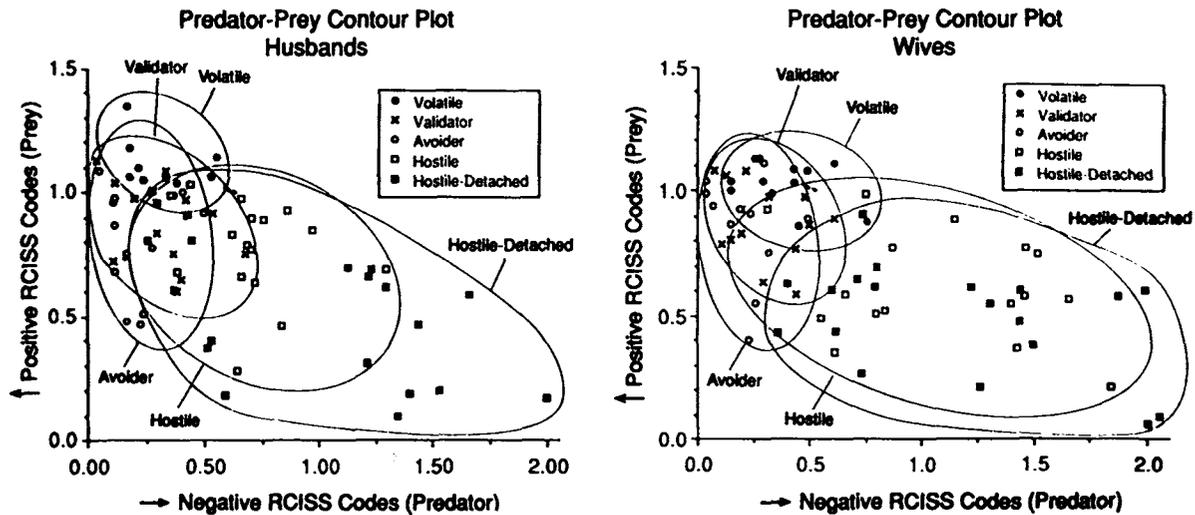


Figure 5. Predator-prey contour plots of positive and negative RCISS points. (RCISS = Rapid Couples Interaction Scoring System. Left panel = husbands' scores; right panel = wives' scores. Figure illustrates the five groups of couples.)

tion. They disclose a lot, both positive and negative feelings. In their home they tend to have separate physical spaces and control accessibility to them. They have no regular daily schedule. The third type, the separates (avoiders) are characterized by separateness and interpersonal distance. There is a low level of companionship and sharing. Their values resemble those of traditional (validators), but they value separateness and maintain autonomy in the use of space. They tend to avoid all marital conflicts.

Although one must be cautious in inferences drawn from correlations, the data suggest that most of the negative affects and behaviors sampled by the RCISS and the SPAFF were corrosive for the longitudinal stability of marriage. These findings are not consistent with Gottman and Krokoff (1989), who concluded that anger and disagreement have potentially positive longitudinal effects. The dependent variable used by Gottman and Krokoff was not marital stability but rather changes in marital satisfaction over time. Although marital satisfaction and stability are correlated, the correlation tends to be quite weak (around 0.2; Gottman & Levenson, 1992). The different dependent variables could explain the inconsistency in findings. It could also be the case that the changes in marital satisfaction that Gottman and Krokoff found were not meaningful in relation to issues of marital dissolution. However, for changes on the Locke-Wallace (for which $SD = 15$), their ranges for husbands and wives were -15 to 30 and -33 to 36 , respectively, which would seem to be large. Finally, it might be that Gottman and Krokoff inadvertently sampled one type of couple, namely, conflict engagers. For conflict engagers, conflict avoidance may, in fact, predict the deterioration of marital satisfaction over time.

Models of Marriage Implicit in Marital Therapy

It appears that conflict avoidance is not necessarily dysfunctional, nor is intense conflict engagement and escalation neces-

sarily dysfunctional. Negativity appears to be dysfunctional only when it is not balanced with about five times the positivity, and when there are high levels of complaining, criticizing, defensiveness, contempt, and disgust. Even stonewalling (the listener's withdrawal from interaction), as in the avoiders, is not dysfunctional unless it occurs at very high levels (as in the hostile/detached couples) or is not balanced with positive speaker behaviors. It is fair to say that the validating marriage has implicitly been the sine qua non model of the ideal couple in behavioral marital therapy. Therapists place a high premium on listening, for example. Combativeness is minimized. Wholeness is emphasized. Also, conflict avoidance is not considered a valid style of marriage, nor are techniques of avoidance taught by marital therapists. Yet, these data suggest that couples themselves divide and subdivide into at least three distinct adaptations, only one of which is currently captured in marital therapy.

Predator-Prey Model

If the mathematics of the predator-prey model have any validity beyond their ability to represent the data, there is one further implication that is interesting to discuss. Just as the prey is necessary for the predator's survival, so the predator is necessary for the prey's (and the entire ecology's) survival. Without the predator, the ecology becomes potentially out-of-balance and ultimately unstable. In my application, this suggests the speculation that negativity is as necessary as positivity for the survival of a marriage. It may very well be the case that negativity and negative affect have a positive, prosocial role in intimate relationships. They may play a role in balancing opposing qualities that are both desirable in a marriage, such as intimacy and autonomy; they may also serve a role in keeping attraction alive over long periods of time. A relationship that is totally positive may thus be as undesirable and unstable as one that is all negative.

It is interesting to consider why it is that some individuals may be drawn to some kinds of relationships and not others. It may be the case that people tend to seek levels of affect or affective intensity consistent with their own physiological reactivity (Matthews et al., 1986) and that these variables have a large biological component.

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