Chapter 1
Prelude: Relational Communication and the Link to Deception

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In 1984, when Jerry Hale and I published our first article on "The Topoi of Relational Communication" (Burgoon and Hale 1984), it had been 3 years in the making, 3 years trying to synthesize the perspectives of the various social science rivulets feeding into our conceptual stream of relational communication themes. Some scholars took issue with our advocacy of 12 interdependent themes, arguing that the two superordinate dimensions of dominance-submission and affection-hostility held longstanding status in the world of interpersonal relationships and all the other themes were merely auxiliaries, while others took issue with our methodology for uncovering meaningful message themes (Burgoon and Hale 1987). But our objective had been to highlight those "stock" topoi—ones devoid of specific content but relevant to a dyad member's status vis à vis another—that communicate how members feel about one another or could be used by a third party to characterize the relationship: they trust each other implicitly (trust-distrust), she greets him with warmth and inclusiveness (affection-hostility), their understanding of one another is a mile wide and an inch deep (depth-superficiality), she expects her employees to show respectful decorum with her (formality-informality) and they in turn regard her communication with them as cold and detached (involvement-detachment), he becomes distressed whenever his boss enters the room (emotional arousal-relaxation) and his posture shrinks to become more diminutive and appeasing (dominance-submission).

These dimensions, and several others, each carry nuanced meaning that "speaks," mostly nonverbally, to how participants in a relationship regard one another, the relationship itself and themselves within the relationship. Each theme has an amalgam of nonverbal and linguistic signals that are non-redundant with those of other

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themes. If they were redundant, they would lose their unique meanings and could be eliminated.

Application to Deceptive Group Interaction

Within the current project, the purpose of the relational dimensions is twofold: (1) to gauge how group members regard one another by observing their displayed relational messages rather than questioning them directly and (2) to gauge whether relational messages predict who is deceptive and who is not. In the former case, are relational messages of dominance, arousal and trust evident in how group members behave? In the latter case, would it be beneficial to measure the behavioral indicators directly or to fuse them into their constituent relational message themes to predict veracity?

In a previous deception experiment employing a mock theft, Jensen et al. (2008) applied a Brunswikian lens model to "identify configurations of micro-level deception cues that predict mid-level percepts which in turn predict attributions" (p. 428). Analyzed were measures of tension, arousal and involvement. Due to low intraclass reliability for the measure of dominance, it was omitted from the analysis. When multiple predictors were included in the model, arousal and involvement emerged as predictors of deception. Deceivers (those who committed a theft of a wallet from a classroom) were more aroused and less involved than truth tellers (those who were innocent bystanders in the classroom during the theft). When single predictors were used, tension was also negatively associated with honesty; more tension was associated with dishonesty or deception. Thus, relational expressions of arousal, nonrelaxation and involvement were relevant to distinguishing truthful from lying interactants.

In the context of the current experiment, relational communication plays a role in two respects. Here we provide a brief overview of how relational message themes gauge interpersonal relations across time and how they predict team member veracity. The scenario in use is a game in which players designated as Villagers attempt to thwart infiltration by players designated as Spies. The Villagers are assumed to be truth tellers. Spies are assumed to be deceivers. Through successive rounds of missions, Villagers vote for missions to succeed and Spies vote for missions to fail. Along the way, team members must vote for leaders of each mission and must approve the team members who are proposed to be on a mission team.

Relational Communication Hypotheses

Relational messages come into play (1) as covert communication among Spies, who know each other's identity and must decide how to collude with one another surreptitiously to make missions fail, (2) as overt messages among Villagers who must

make decisions about who to select as mission team leaders and team members, and (3) finally, as implicit communication between Spies and Villagers, positioning themselves along dominance-submission and trust-distrust continua as they negotiate mission team composition and leadership.

Spies, who must be deceptive if they are going to sabotage the missions and win the game, would seem to have a few alternatives at their disposal. One is to express to other team members that they are involved in the game and trustworthy so that they are selected as leaders and team members. Another is to convey that they are calm, relaxed, and not distressed, on the assumption that displays of distress might be read as signs of nervousness and deception.

Villagers in turn may be tentatively putting out feelers to ascertain who to trust and who can help them win the game. Conversely, they may be on the look-out for signals that feed suspicion and distrust as they try to discern who may sabotage the game. Apart from overt accusations of those they believe are spies, players must rely on relational communication to compete and complete the game.

We expected that Spies might opt initially to be passive, "hiding in the weeds" as it were, to keep their identity concealed but they might increasingly engage in "persuasive deception" (Dunbar et al. 2014) over time to earn other team members' support. We also expected that Spies might betray some nervousness, compared to the Villagers. Finally, we expected that Villagers would be seen as more trustworthy than Spies, although if Spies succeeded in their persuasive efforts, they might gain as much trust as Villagers.

Method

To assess how relational messages might be utilized in the games, the players were asked after every other round to complete self-report measures of how nervous (aroused) or relaxed, dominant or submissive and trustworthy or suspicious the other players were. Additionally, ratings were collected after a beginning ice breaker phase of the game, which served as a baseline for comparison. Scales ranged from 1 (not at all) to 5 (very). Only Villagers' ratings were considered since Spies' ratings would be contaminated by their knowledge of one another's role.

Results

A repeated measures regression analysis was conducted across the rated rounds of the game. The results for nervousness across four periods of ratings, beginning with the baseline and ending with the final ratings, produced a significant main effect, $F(3,996) = 5.23$, $p = .001$, partial $\eta^2 = .016$, and an interaction between nervousness and game role, $F(3,996) = 2.75$, $p = .041$, partial $\eta^2 = .008$. Whereas Spies maintained the same degree of nervousness they displayed at the outset of the game,

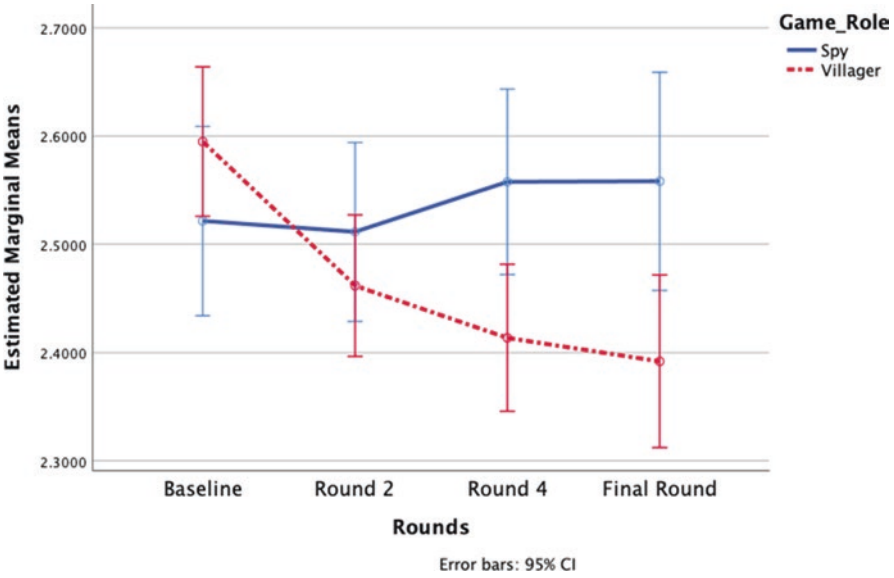

Fig. 1.1 Villager and Spy nervousness over time

Villagers became increasingly relaxed (see Fig. 1.1). Thus, an astute observer might have noticed that some of the players in the group were not as calm and collected as the majority. Villagers might have made use of this signal to identify Spies, and Spies might have used this subtle difference to confirm the identity of other Spies, although the difference between Spies and Villagers was rather slight. Thus, it wasn't that Spies signaled *more* nervousness but rather that they failed to show the increased relaxation that characterized the truth-telling Villagers. They might be credited with communicating the same degree of arousal that they had at the start of the game, before roles were even known, but they still set themselves apart from the calmer Villagers.

The same repeated measures analysis on ratings of trust produced main effects for game role, $F(1,332) = 104.22$, $p < .001$, partial $\eta^2 = .239$, trust ratings across time $F(3,996) = 127.67$, $p < .001$, partial $\eta^2 = .278$, and the interaction between game role and trust, $F(3,996) = 47.00$, $p < .001$, partial $\eta^2 = .124$ (see Fig. 1.2). Even though Villagers did not know who the Spies were, their ratings showed they trusted the Spies less, and those ratings continued to decline over the course of the game. Ratings of Villagers, by contrast, remained higher and showed an upswing over time, although never returning to their baseline level, possibly because suspicion about the presence of Spies tempered their judgment somewhat. When only four rounds were included in the analysis, results were even more striking. Thus, participants' perceived trustworthiness of one another was a good barometer of who actually could be trusted.

Finally, results on dominance largely paralleled those for trust. Because dominance is analyzed extensively in other chapters in this volume, they are omitted here.

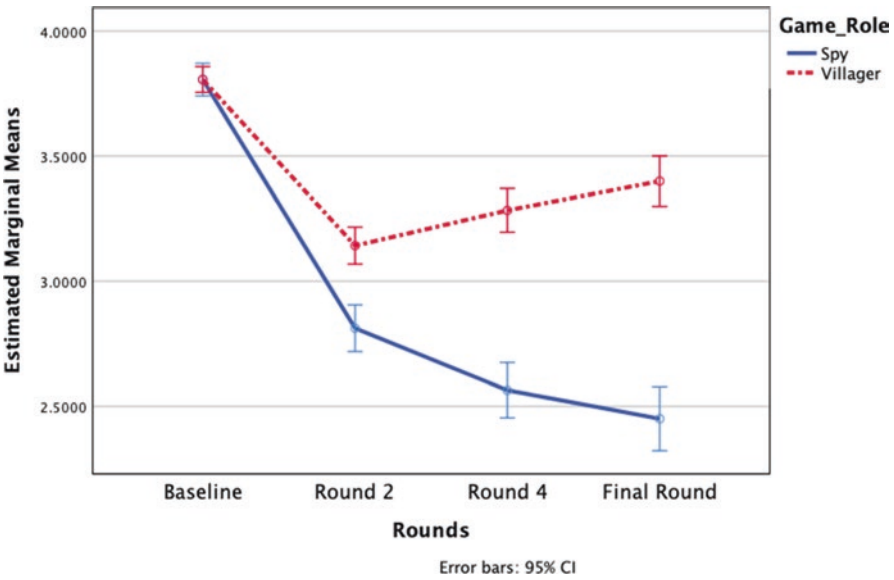

Fig. 1.2 Mean trust ratings by game role and rounds

Table 1.1 Tests of equality of group means between spies and villagers

	Wilks' Lambda	*F*	df1	df2	Significance
Trust	.848	123.197	1	687	<.0001
Dominance	.964	25.505	1	687	<.0001
Arousal	.993	5.173	1	687	.023

The paramount objective in the SCAN project is to identify deceivers. Can the relational messages offer tacit indications of who is truthful and who is not? An initial analysis with location included as a covariate to capture possible cultural differences showed location to be nonsignificant. However, all three relational message dimensions independently distinguished between Spies (deception) and Villagers (truth), as shown in Table 1.1.

To determine the ability of the relational messages to predict who were Spies and who were Villagers, we conducted a multiple discriminant analysis. The first and most powerful predictor was trust: Trust was much higher for truth tellers than deceivers, indicating that relational messages were a good signal of who was actually a deceiver and who, not (see Table 1.2). Only one predictor remained in the final model, Wilks' R_c = .39. The cross-validated classification matrix showed the model accurately identified Villagers at 79% but only identified Spies at 55% accuracy. These results might suggest that other data would be needed to accurately identify the Spies.

However, by taking the dynamics of judgments into account and including measurements of the relational messages for each round, a different picture emerges. If

Table 1.2 Discriminant analysis distinguishing spies (deceivers) from truth tellers

Step	Entered	Wilks' Lambda statistic	df1	d2	d3	Exact *F*	df1	df2	Significance
1	Final trust rating	.828	1	1	630	131.16	1	630	<.0001
2	Baseline dominance	.820	2	1	630	69.02	2	629	<.0001
3	Round4 trust	.812	3	1	630	48.33	3	628	<.0001
4	Final dominance	.807	4	1	630	37.55	4	627	<.0001

ratings from participants who completed at least three rounds are included in the analysis, better predictions develop. Four variables are in the final model: last round trust, second round trust, last round dominance and baseline dominance. The four-variable model was highly significant, Wilks' R_c = .553. The cross-validated classification matrix showed the model accurately identified Villagers at 81% and Spies at 65% accuracy.

Discussion

These results underscore the importance of more granular, temporal measurement. The variance accounted for, and the accuracy of distinguishing truth tellers from deceivers, show a robust assessment of deception that is evident from relational communication alone. Measurement is also important at each juncture of interaction. That is, impressions at different stages of the group process add information to the ability to predict veracity. Interestingly, at none of the junctures does the traditional signal of arousal enter the model. In other words, even though nervousness discriminated between Spies and Villagers, considerations other than nervousness are even more important indicators of truth and deception.

Anytime humans are involved in an activity involving social interaction, how they regard one another and their interpersonal relationship can create a fluid situation that "greases the skids," or one that creates barriers to forward progress. Ironically, in the case of deception, what is needed is knowledge of the barriers that lead to thoughtful scrutiny of others rather than facile acceptance. It may be that relational communication becomes the leading edge in assessing the truthfulness or deceptiveness of others. In the chapters that follow in this volume, many ways of gauging dominance, arousal, and trust are analyzed along with their ability to predict deception. The overriding message is that relational messages are an important signpost in group interaction of the interpersonal relationships among group members and can alert one to suspicions and distrust even when such sentiments are not spoken aloud.

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