WORKING PAPER
ALFRED P. SLOAN SCHOOL OF MANAGEMENT

THE EFFECT OF EXTERNALLY SET GOALS
ON REACHING
INTEGRATIVE AGREEMENTS IN COMPETITIVE MARKETS

Margaret A. Neale
Max H. Bazerman

March 1984

MASSACHUSETTS
INSTITUTE OF TECHNOLOGY
50 MEMORIAL DRIVE
CAMBRIDGE, MASSACHUSETTS 02139
THE EFFECT OF EXTERNALLY SET GOALS
ON REACHING
INTEGRATIVE AGREEMENTS IN COMPETITIVE MARKETS

Margaret A. Neale
Max H. Bazerman

March 1984 W.P. 1547-84
THE EFFECT OF EXTERNALLY SET GOALS ON REACHING INTEGRATIVE AGREEMENTS IN COMPETITIVE MARKETS

Margaret A. Neale
Department of Management and Policy
University of Arizona
Tucson, AZ 85721
(602) 621-7474

Max H. Bazerman
Sloan School of Management
Massachusetts Institute of Technology
Cambridge, MA 02139
(617) 253-3638

Please address all correspondence to the first author. The authors wish to thank Roy Lewicki and Tim Hall for their helpful comments on previous drafts of this manuscript.
THE EFFECT OF EXTERNALLY SET GOALS ON REACHING INTEGRATIVE AGREEMENTS IN COMPETITIVE MARKETS

ABSTRACT

The study of the negotiation process has enjoyed a recent resurgence of scholarly interest. Of particular concern is the ability of negotiators to achieve solutions which result in integrative outcomes. The purpose of this study is to identify the effects of different levels of aspiration/goals on negotiator success and their ability to reach integrative solutions in a competitive market. One hundred fifty-eight subjects who were assigned one of four levels of goal difficulty - no goal, compromise goal, challenging goal, and difficult goal - participated in a competitive, multi-person, multi-transaction market simulation. The study found (1) challenging, difficult goals significantly enhanced participants' performance; (2) the more difficult the goal, the fewer transactions were completed; and (3) while there were no differences in total profitability among the challenging goal, compromise goal, and no goal, the difficult goal condition had a significant and negative effect on the ability of participants to achieve profitable outcomes within the market. A discussion of these findings and directions for future research are presented.
The study of bargaining and negotiation has undergone a major resurgence of interest in recent years (Pruitt, 1981; Raiffa, 1982; Fisher & Ury, 1982; Tietz, 1983; Bazerman & Lowicki, 1983; Neale & Bazerman, 1984). One of the primary topics of focus concerns the processes which lead to the development of integrative agreements. An outcome is said to be integrative when the negotiators are able to reach a solution which enhances both parties and produces high joint benefit. The purpose of this study is to identify the effects of different levels of aspirations on negotiator success and their ability to reach an integrative solution in a competitive market.

Agreements are integrative to the extent that they reconcile the parties' interests and yield joint benefits higher than those which could be created by simple compromise. Since the first description of integrative bargaining (Walton & McKersie, 1965) as one of the four types of bargaining, a number of factors have been identified which increase the probability that negotiators will utilize this "win-win" strategy. Pruitt and his colleagues, among others, suggest that integrative solutions are most likely to occur if both parties have high aspirations and one or both adopt a problem solving strategy (Kimmel, Pruitt, Magenau, Konar-Goldband, & Carnevale, 1980; Ben Yoav & Pruitt, 1982; Nachajsky, Carnevale, Van Slyck, & Pruitt, 1982; Bazerman, Magliozzi, & Neale, in press). It is interesting to note that when negotiators are motivated to maintain their high aspiration levels, there is a greater likelihood of outcomes utilizing creative problem solving and achieving high joint benefit. However, when negotiator aspirations are not sufficiently high, negotiators are too quick to make concessions and likely to
produce solutions using a simple compromise strategy which does not maximize joint profit (Pruitt, 1981). Thus, it seems that a problem solving (i.e., generally cooperative) orientation must be associated with conditions which promote high aspirations to encourage integrative solutions.

While the findings of Pruitt and his colleagues have been consistent with reference to the antecedents of integrative agreements, these results are based upon research which focuses on a single transaction with a single opponent where time constraints are not particularly salient. In addition to this particular state of the world, there are a number of other situational characteristics which Pruitt and others have not explored which may improve the generalizability of their results. Thus, it seems important to focus on the impact of high aspirations with a problem solving orientation on reaching integrative solutions in other contexts where, for example, there are multiple opponents and transactions as well as time constraints. Would the high aspiration level of participants — a necessary condition for integrative solutions — inhibit the ability of the participants to complete multiple transactions and reduce the overall profitability of the market? A second concern with Pruitt’s results is the amount of variation in outcomes of his subjects. He reports that not all subjects achieve the fully integrative solution in the one opponent, one transaction bargaining simulation. Is this variation a function of the methodology or is it a permanent effect — that is, can negotiators approach but rarely reach an integrative solution? An alternative position that markets converge to equilibrium is suggested by the work of Plott and Agha (1983). This suggests that,
over time, negotiators may learn to become integrative.

A central argument of economists is that additional choices can only make a decision-maker (e.g., negotiator) better-off and additional constraints can only make a negotiator worse-off (Thaler, 1980). This position would argue that the existence of a constraint on the offers that a negotiator (who is trying to maximize the profitability of his/her constituency) is allowed to accept can only hinder his/her success. In contrast, Bazerman, Magliozzi, and Neale (in press) found that negotiators who were given moderately difficult profit constraints achieved more profitable transactions than negotiators without such constraints. Bazerman et al. interpreted this result by arguing that the constraint leads negotiators to search for and learn of the benefits of integrative solutions.

Further opposition to the economists' prediction that limits or constraints reduce performance, the influence of setting standards for performance (be they limits or goals) has been investigated in a series of studies concerned with the impact of goal setting on employee motivation (Locke, 1968; Latham & Locke, 1979; Latham, Cummings, & Mitchell, 1981). This body of research suggests that goal setting (e.g., the assignment of a specific task, quota, performance standard, or objective) can increase individual motivation and improve individual performance (Latham & Yukl, 1975).

Research suggests that there are certain aspects of goal setting activities which have a differential effect on subsequent performance. Goal setting is most effective in improving performance when (1) goals are specific rather than vague and (2) goals are challenging, yet obtainable (Steers & Porter, 1974;
A third concern of many researchers in goal setting has been the differential effects on performance of internally versus externally determined goals. The findings (Latham & Marshall, 1982; Dosset, Latham & Mitchell, 1979; Latham, Mitchell, & Dosset, 1978) indicate there are few consistent differences in performance between assigned goals (externally set) and participatively determined (internally set) goals. Participative goal setting was superior to assigned goal setting only to the degree that it lead to the setting of higher goals. However, when goal difficulty and specificity is held constant, this research supports the premise that it matters more that a goal was set rather than how the goal was set. It is important to note that this study deals specifically with the influence of externally set goals/aspiration levels on negotiator performance.

In applying this literature to the area of negotiation, a number of obstacles are quickly encountered. There are likely to be many negotiating situations which might produce aspiration levels or goals which would be extremely difficult either to operationalize or to obtain. One might easily imagine a negotiating situation in which the demands of the constituency, representing an externally set goal are vague ("get the biggest cost of living adjustment you can"), provide no direction ("do the best you can") or represent impossible or extremely difficult outcomes to secure ("get a 20% increase in salary and complete job security benefits"). Thus, it seems an important next step to investigate, within a negotiating context, the effect of setting external goals (i.e., goals set by a constituency) with varying degrees of difficulty on the achievement of joint benefit
(integrative) solutions.

It seems that "high aspirations" necessary for reaching integrative agreements in bargaining theory or the "challenging goals" of goal theory may be too simplistic a representation of the specific antecedents necessary to reach an integrative solution. How high must aspirations be to foster an integrative solution rather than a cooperative, cozy solution? To what level of difficulty can goals be set such that they produce the maximum performance? Do extremely difficult/impossible goals have a negative or positive influence on performance? It is likely that very high aspirations/goals because would reduce the parties' success in maximizing overall performance. That is, performance standards which are very difficult will have a negative effect on overall individual performance (Locke, 1982). A negotiating situation analogous to extremely difficult performance standards is a constituency making excessive, extreme demands of its negotiator. Considerable research has been done which consistently indicates a decrease in individual negotiator performance when constituency based expectations are extreme (Rubin & Brown, 1975; Neale, in press).

The basis of the integrative solution of high joint benefit is the inability or unwillingness of the parties to accept a compromise or unduly accommodating alternative. Pruitt (1983; Pruitt & Rubin, in press) indicates that a primary condition necessary for the development of integrative solutions is the simultaneous existence of high participant aspiration and resistance to compromise, such that it may be impossible to resolve the issue at conflict unless a way can be found to join the two parties' interests. Thus, one might expect that setting an extreme aspiration level for the participants may have
detrimental effects on total profitability (profit per transaction times number of interactions). Extreme goals may alter the nature of the interaction in such a way to maximize the achievement of the participants on the average but limit their overall success by reducing the number of transactions completed. That is, extreme goals/aspirations can be expected to reduce the overall joint success of the parties while increasing the average level of performance per interaction.

The differences in overall success and average success per transaction is likely to result from time constraints. That is, a final characteristic of the bargaining situation which is likely to affect the acquisition of an integrative solution is the time constraints inherent in the interaction. Thomas (1976) indicates that of the five conflict handling styles or strategies -- competing, collaborating, compromising, avoiding, and accommodating -- compromising and competing are those most suited to situations in which time constraints are severe. These two strategies are also those which are traditionally associated with the "fixed pie" perspective of distributive bargaining (Walton & McKersie, 1965). The strategy for problem solving or collaboration -- finding an integrative solution when both sets of concerns are too important to be compromised (Thomas, 1977) -- is particularly appropriate in situations where the primary objective is to find stable solutions which commit both parties to the outcome. These types of descriptions and Pruitt's (1981) work on integrative solutions imply the existence of the time necessary to exchange information and develop creative solutions which result in high joint benefit. Thus, in a multi-transaction bargaining
situation, one would expect negotiators using a competing/compromising strategy to complete more transactions but not to reach solutions which have high profit for the participants.

One would also expect negotiators to improve their performance (i.e., reach solutions of greater joint benefit) as they gained experience in the market. Because the compromise/competing strategies of distributive negotiation are so common (Walton & McKersie, 1965; Thomas, 1976), it is likely that these will be the first strategies chosen by negotiators in unknown situations. With experience, negotiators should be more likely to reach agreement (Kochan & Jick, 1978) and more likely to reach solutions of greater joint benefit (Bazerman, Maglio, & Neale, in press).

Based upon the previous discussion, a number of hypotheses have been suggested. Those hypotheses, formally stated, appear below:

**Hypothesis 1**

As negotiators gain experience in the market, they will be more likely to reach solutions which are more integrative in nature.

**Hypothesis 2**

Moderately difficult and extremely difficult goals will result in greater average profit per transaction than will compromise goals or no goals condition.

**Hypothesis 3**

There will be an inverse relationship between goal difficulty and number of transactions completed.

**Hypothesis 4**

Moderately difficult goals will result in greatest total profit for the negotiator during the market interaction while extremely difficult goals, the least total profit for the negotiator during the market interaction.
METHODS

Subjects

One hundred-fifty eight undergraduate business students at the University of Arizona voluntarily participated in this free market simulation in fulfillment of a course requirement. Seven different markets were conducted in order to accommodate student scheduling constraints. The number of participants in the seven markets were 20, 32, 24, 18, 20, 24, and 20. Subjects were told they were participating in an investigation of individual bargaining skill.

Design

As the subjects entered the classroom, they were randomly assigned to one of eight conditions. Subjects were assigned to be (1) either the buyer or the seller and (2) either in the no goal, compromise goal, challenging goal, or extremely difficult goal condition. While there were equal numbers of buyers and sellers, slight variations in cell sizes across the goal dimension condition occurred because of the uneven distribution of subjects in the seven markets.

Procedure

The free market simulation used in this study was developed by Bazerman, Magliozzi, and Neale (in press). Upon arrival in the classroom, subjects were provided with instructions that described the exercise as a simulation of a free market between buyers (retail stores) and sellers (manufacturers of refrigerators). Participants were told that product quality among all manufacturers was identical and that profits were affected by only three factors—delivery terms, discount level, and financial terms. The information included a
profit schedule showing nine levels labeled "A" through "I" for each of the factors (see Tables 1 and 2 for seller and buyer profit schedules). Subjects saw the profit schedule for their role only.

-----------------------------
Insert Tables 1 and 2 about here
-----------------------------

Buyers would achieve their highest profits and sellers, their lowest profits at the "A" levels of delivery, discount, and financing; sellers would achieve their highest profits and buyers, their lowest profits at the "I" levels. In addition, delivery time holds the highest profit potential and financing terms, the lowest for buyers. In contrast, delivery time holds the lowest profit potential and financing terms, the highest profit potential for sellers. Through this mechanism of differential value, the exercise offers integrative potential to the participants.

Although an extremely unlikely possibility, if either party were able to convince the other party to accept his/her optimal terms (A-A-A for buyers and I-I-I for sellers), then his/her profit for the transaction would be $8,000. The opponent would receive $0. The simple compromise solution of E-E-E yields $4,000 to each party for a combined profit of $8,000. However, if the parties were able to reach the fully integrative agreement of A-E-I, then each would receive a profit of $5,200 and the combined profit of the two negotiators would be $10,400.

In this market methodology, each subject was told that s/he was either a buyer or a seller in a market in which they could complete as many transactions as possible in the fixed amount of time - 25 minutes. For example, a buyer could potentially com-
plete as many transactions as the number of sellers in the room. Since an equal number of buyers and sellers existed in each market and the simulation was perfectly symmetrical, all negotiators in a particular market had identical profit potential.

During the market simulation, buyers and sellers were required to make contact at the front of the classroom and then proceed to a "bargaining area" to engage in the actual negotiation. Once an agreement was reached, a "transaction form" was completed which identified the buyer, the seller, the terms of the contract - discount, delivery, and financing levels, and the time at which the contract was completed. After turning in the form, buyers and sellers were free to return to the front of the classroom to make contact for another transaction. The cyclical procedure continued until the end of the twenty-five minute market session.

**Goal Setting Manipulation**

The goal setting condition was manipulated by including a "confidential memo" in the information packet of those subjects in the "compromise goal" condition, the "challenging goal" condition, and the "difficult goal" condition. No memo was included in the "no goal" condition.

The memo, signed by the negotiator's supervisor (i.e., sales manager for those subjects assigned the seller role and head buyer for those assigned the buyer role), stated that it was against company policy to accept any transaction that did not meet the minimum requirements. Explicitly, the memo indicated that no transaction would be accepted which did not meet these minimum requirement. For example, subjects in the "compromise goal" condition read:
"...do not under any circumstances make any deals which result in total profit of less than 'E-E-E.' At this limit, the transaction is detrimental to the overall financial welfare of the company. If you cannot reach this goal with a particular seller (buyer), you should break off negotiations since there are other firms we can deal with..."

The compromise nature of the "E-E-E" goal is that it represents an outcome of $4000 and, thus, allows the participants to "split the pie" in dividing up the obvious $8000 transaction. The compromise goal reinforces the likely pattern of easy solutions - simply divide the available resources by the number of participants in this particular transaction. Those subjects in the "challenging goal" condition were given the same memo except that the figure "$4600" was substituted for the "E-E-E" goal. This $4600 figure represented an outcome which was attainable, but not easily so. In order for a particular negotiator to secure this level of contract, s/he must choose alternatives from a small sample of the choices available approach the integrative solution. Finally, those subjects in the "difficult goal" condition had a goal figure of $5400. This was a difficult goal in that only a very few options would result in outcomes equal to or above the $5400 figure. This goal of $5400 was set higher than the integrative solution so as not to offer the subjects in this condition an "anchor" upon which to base their demands. Thus, to attain a transaction valued at this amount was, indeed, a difficult process.

After administering a short quiz to ensure that the profit and expense schedules were understood, subjects were given final instructions prior to negotiations. For example, sellers were told:

"Talk to buyers and make deals which specify all
three factors. That is, you should propose three-letter deals in your negotiations...overall net profit will be determined by summing the net profits of all the transactions that you complete...assume that market conditions are such that your firm can produce all the refrigerators that you can sell."

After these final instructions, the market simulation began. Upon completion of the market, all participants completed a post-simulation questionnaire that further verified their understanding of the exercise and assessed a number of common attitudes about negotiation. Finally, subjects were given detailed personal and general feedback about their bargaining behavior in a following class session.

Dependent Variables

Four dependent variables were constructed - individual profit per transaction, number of completed transactions, joint benefit per transaction, and total (individual) profit for the market. The four dependent variables are described below, three of which (AVPROFIT, NUMBER OF TRANSACTIONS, and TOTAL PROFIT) were associated with individual negotiator performance. The fourth dependent variable (JPROFIT) focused on the quality of the dyadic agreement.

1. AVPROFIT is the measure of the average profit per transaction for each negotiator.

2. NUMBER OF TRANSACTIONS is a measure of the total number of transactions completed during the market simulation for each negotiator.

3. TOTAL PROFIT is a measure of the total profit each negotiator was able to obtain across all transactions.

4. JPROFIT is a measure of joint profit for the dyad per transaction.

RESULTS

An item was included in the post-simulation questionnaire as
a manipulation check on the goal/aspiration manipulations. The effectiveness of the manipulation was assessed by asking subjects the following open-ended question: "Was there an explicitly stated goal concerning the minimum requirements necessary for you to accept a transaction? If yes, explain." Of the 112 subjects in the three goal/aspiration conditions, 111 indicated that they had explicitly stated goals. Only 3 of those incorrectly identified their goal condition — all three of those were in the "difficult goal/aspiration" condition. All subjects who participated in the competitive market were included in the subsequent analyses.

Hypothesis 1. It was predicted that as negotiators gained experience in the market simulation, they would be more likely to produce more integrative solutions of greater joint benefit. Figure 1 graphically illustrates the achievement of JPROFIT of the dyads in the market over time. These patterns of results suggest that negotiators were indeed able to improve the level of joint profit of the transaction as a function of experience in the market. The influence of time/experience in the market on the joint profit can be shown formally by the following regression (N=474):

\[
\text{JPROFIT} = 8441.37 + 241.62 \times \text{TIMEINT} + e,
\]

\[R^2 = .124 \quad (p<.0001) \]

\[F = 67.48\]

where JPROFIT is the amount of profit achieved by the dyad in a transaction and TIME is the number of minutes into the market in
which this particular transaction occurred (0-25). This analysis was conducted using transactions (a dyadic measure) as the unit of analysis rather than the behavior of the individual participants.

**Hypothesis 2.** It was predicted that moderately difficult and extremely difficult goals would result in greater average profit per transaction than compromise goals or no goals condition. Table 3a shows the means and standard deviations for profit per transaction by goal/aspiration level. The impact of differing goal/aspiration levels can be shown formally by the regression

\[
\text{AVPROFIT} = 45.30 + 9.40G4 + 4.94G3 + 1.97G2 + e, \\
R^2 = .195 \quad (p < .001) \quad (p < .002) \quad (p=\text{ns}) \\
F = 12.25
\]

where \( \text{AVPROFIT} \) is equal to the profit per transaction and \( G4 \) is equal to 1 in the difficult goal condition and to 0 otherwise, \( G3 \) is equal to 1 in the challenging goal condition and 0 otherwise, and \( G2 \) is equal to 1 in the compromise goal condition and 0 otherwise. The results indicate that both difficult and challenging goals have a significant impact on average profit while neither compromise goals nor no goals had a significant impact. That is, the average profit per transaction was \$940 \) greater in the difficult goal condition than in the no goal condition; \$494 greater in the challenging goal condition than in the no goal condition; and \$197 greater in the compromise goal condition than in the no goal condition.
Hypothesis 3. It was predicted that there was an inverse relationship between goal/aspiration level and number of transactions completed during the simulation. The means and standard deviations of NUMBER OF TRANSACTIONS by goal/aspiration condition are presented in Table 3b. As the Table suggests, there is an inverse relationship between goal/aspiration level and


Insert Table 3b about here

number of transactions completed during the market simulation. The impact of goal/aspiration level on the number of transactions completed and can be shown formally by the following regression (N=158):

\[
\text{TOTAL TRANSACTIONS} = 7.07 - 3.1(G4) - .63(G3) - .67(G2) + e,
\]

\[
R = .214 \quad (p<.0001) \quad (p=ns) \quad (p=ns) \quad F=13.75
\]

where TOTAL TRANSACTION is equal to the number of transactions completed during the market simulation and G4 is equal to 1 in the difficult goal condition and 0 otherwise; G3 is equal to 1 in the challenging goal condition and 0 otherwise; and G2 is equal to 1 in the compromise condition and 0 otherwise. These results indicate that the number of transactions completed decrease as the difficulty of the goal increases. That is, when there is no externally set goals, compromise goals or challenging goals, participants are able to complete, on the average, approximately seven transactions. In the difficult goal condition, they were only able to complete approximately 3.97 transactions.

Hypothesis 4. It was predicted that moderately difficult goals
would have a significant, positive effect on total profit while extremely difficult goals would have have a negative effect on overall profitability and compromise goals and no goals would have no effect on overall profitability. The means and standard deviations of TOTAL PROFIT are presented in Table 3c. As this Table suggests, there is a significant and negative effect for the extremely difficult goal on TOTAL PROFIT but there is no significant effect for either of the other three conditions. The impact of goal difficulty on TOTAL PROFIT can be shown formally by the following regression (N=158):

\[
\text{TOTAL PROFIT} = 29727 -8942(G4) +1368(G3) -659(G2) + \epsilon,
\]

\( R^2 = .201 \quad F=7.02 \)

where TOTAL PROFIT is the profit achieved by the individual for the transactions completed during the market, G4 is equal to 1 in the difficult goal condition and 0 otherwise; G3 is equal to 1 in the challenging goal condition and 0 otherwise; and G2 is equal to 1 in the compromise goal condition and 0 otherwise. The total profit was greatest in the challenging goal condition, and lowest in the difficult goal condition. Thus, total profit was about the same for the no goal, compromise goal, and challenging goal condition (around $30,000) and significantly less (approximately $21,000) for the difficult goal condition.

**DISCUSSION**

The purpose of this study was to investigate the effect of different levels of goals/aspirations on the ability of negotiators to
achieve an integrative solution in a competitive market. As the results suggest, differing levels of goals/aspirations have a significant effect on the acquisition of an integrative response in a competitive market. Specifically, the results provide further support for the direct, positive relationship between goal difficulty and performance as measured by average profit. Further, while moderately difficult and extremely difficult goals are directly related to performance on the average transaction, the time required to complete a transaction increases when the goal/aspiration level is very difficult. Thus, the overall performance of negotiators is reduced when goal/aspiration level is extremely high because of the considerable amount of time required to complete a transaction under this condition.

Based upon the findings of this investigation, negotiations may be structured in such a way as to encourage the acquisition of an integrative, win-win solution. As this study and the work of Pruitt and his colleagues (Pruitt, 1981) suggest, the likelihood of an integrative solution is increased under the following conditions:

1. Participants have high goal/aspiration levels (which, in both this and Pruitt's research are operationalized as externally-set aspiration levels)

2. Participants are simply not willing to compromise.

3. Participants have sufficient time to form the relationship and exchange the necessary information to develop an integrative solution.

In addition to supplementing the work of Pruitt (1981) on the acquisition of integrative solutions in a competitive negotiating
situation, this study also provides initial support for Thomas's (1976) contention that the choice of conflict resolution strategy should be determined by the situational characteristics of the conflict. That is, given a situation in which a resolution or decision is needed immediately, the time requirement necessary to develop an integrative solution may be prohibitive. In this case, the more effective strategy may be to use a competing or compromise strategy rather than a collaborating/integrative strategy. However, one may have to trade quality of the decision for immediacy of response. If one has few time constraints, then the quality of the outcome can be significantly enhanced by the use of high, externally set goals/aspiration levels coupled with the negotiator's willingness to explore alternative means in a problem-solving orientation. The existence of this problem-solving orientation is unlikely to exist when participants are bombarded with external demands to meet pressing deadlines, especially if the time demands dominate the goal demands.

Pruitt (1983) suggests achieving integrative solutions has important implications for the stability of both the bargaining relationship and the contract. The underlying nature of this stability proposed by Pruitt may be the perceived equity of the "win-win" solution of the integrative outcome. If the joint performance of the parties is high, then the participants will likely see the outcome as equitable and, according to equity theory (Adams, 1963), stable. Thus, the stability that Pruitt (1981) attributes to integrative solutions may result from both their perceived equity and outcome maximization. While one might suggest that "compromise" solutions are, by their very nature, equitable, they do not offer the joint maximization of the integrative solutions. That is, within this
competitive market, a solution of "A-E-I" is just as equitable as a solution of "E-E-E." However, the solutions which result from a more problem-solving, high joint benefit orientation are likely to be perceived as more attractive as they also maximize individual outcome while maintaining equity. Thus, when reviewing these two findings simultaneously, it may be that the best, most stable outcome occurs in the challenging goal/aspiration condition. Based upon this, it seems that setting challenging goal/aspiration levels for the participants and giving them sufficient time for problem solving to occur in which to generate integrative solutions will increase the probability of their securing these high quality (i.e., high joint benefit), stable outcomes indicative of the win-win strategy.

There are limitations to this study which must be considered. This study only addresses the influence of externally set goals (i.e., goals set by a constituency of sorts). Negotiators setting their own and, possibly, different goals may behave very differently. Further, this study utilizes a number of measures of performance which may reflect differing standards by which to judge the quality of a particular integrative agreement as opposed to overall performance. Finally, while the market simulation used in this research does address many of the usual concerns of laboratory research (Bazerman, Magliozzi, & Neale, in press), the issue of the generalizability of the results of student-subjects to professional negotiators still exists. The implications of these findings relative to the effect of goal/aspiration levels on negotiator behavior may be applicable to many types of negotiators in many different settings. Not only should the effect of differing levels of goals/aspirations on the acquisition of integrative solutions be of interest to professional negotiators,
but also it should be of interest to any group of negotiators, professional or amateur, who are concerned with the quality and/or stability of their interactions.

Finally, the results of this research suggest some interesting questions for future investigations. An interesting next step would be to investigate within the competitive market paradigm the differential emotional responses of the participants to integrative versus distributive outcomes. In particular, are the negotiators aware of the lack of equity and does that awareness have any implications for or effect on future negotiations of the participants?

Another, and perhaps more generalized, question responds to the limitations of this study. It would seem quite important to determine the differences between professional and amateur negotiators within a common simulation. For example, while there has been considerable criticism of laboratory studies using student subjects, there has been little empirical research comparing student-subjects (amateurs) with professional negotiators (experts) (Northcraft & Neale, 1983).

In summary, this study provides further support for the notion that situational constraints of the negotiation interaction are important considerations in the acquisition of an outcome of high joint benefit, an integrative solution. Given sufficiently challenging goals/aspirations coupled with the necessary time to pursue a problem-solving strategy, the probability of reaching a solution of high joint benefit is significantly enhanced. The importance of such solutions is best summarized by Pruitt (1983) in that integrative agreements will contribute more to the stability of the agreements, the relationship between the parties, and the welfare of the larger community in which the parties are members than do compromises.
The market methodology used in this study responds to the limitations of field research on negotiation (e.g., inaccessibility of private negotiations, the difficulties of obtaining causal data, the difficulty in obtaining data on the same independent and dependent variables across transactions). At the same time, the market methodology overcomes many of the limitations accepted by most social psychological laboratory studies of negotiation (e.g., one-shot negotiations, the assumed irrelevancy of time, external validity, ignoring the existence of economic markets that surround the transaction). In contrast, this market simulation may provide a better alternative by providing (1) the control necessary to understand the decision processes of negotiators and (2) the reduction of the inherent limitations of laboratory studies.
REFERENCES


FIGURE 1

Average Profit for buyers and sellers of transactions completed in each five minute segment of the market.

COORDINATES BY TIME PERIOD

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Coordinates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(4365, 4229)</td>
</tr>
<tr>
<td>2</td>
<td>(4433, 4389)</td>
</tr>
<tr>
<td>3</td>
<td>(4642, 4346)</td>
</tr>
<tr>
<td>4</td>
<td>(4922, 4619)</td>
</tr>
<tr>
<td>5</td>
<td>(4950, 4728)</td>
</tr>
</tbody>
</table>
### TABLE 1
Seller Profit Schedule

<table>
<thead>
<tr>
<th>Delivery Time</th>
<th>Discount Terms</th>
<th>Financing Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$000</td>
<td>$000</td>
</tr>
<tr>
<td>B</td>
<td>200</td>
<td>300</td>
</tr>
<tr>
<td>C</td>
<td>400</td>
<td>600</td>
</tr>
<tr>
<td>D</td>
<td>600</td>
<td>900</td>
</tr>
<tr>
<td>E</td>
<td>800</td>
<td>1200</td>
</tr>
<tr>
<td>F</td>
<td>1000</td>
<td>1500</td>
</tr>
<tr>
<td>G</td>
<td>1200</td>
<td>2100</td>
</tr>
<tr>
<td>H</td>
<td>1400</td>
<td>1800</td>
</tr>
<tr>
<td>I</td>
<td>1600</td>
<td>2400</td>
</tr>
</tbody>
</table>

### TABLE 2
Buyer Profit Schedule

<table>
<thead>
<tr>
<th>Delivery Time</th>
<th>Discount Terms</th>
<th>Financing Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$4000</td>
<td>$2400</td>
</tr>
<tr>
<td>B</td>
<td>3500</td>
<td>2100</td>
</tr>
<tr>
<td>C</td>
<td>3000</td>
<td>1800</td>
</tr>
<tr>
<td>D</td>
<td>2500</td>
<td>1500</td>
</tr>
<tr>
<td>E</td>
<td>2000</td>
<td>1200</td>
</tr>
<tr>
<td>F</td>
<td>1500</td>
<td>900</td>
</tr>
<tr>
<td>G</td>
<td>1000</td>
<td>600</td>
</tr>
<tr>
<td>H</td>
<td>500</td>
<td>300</td>
</tr>
<tr>
<td>I</td>
<td>000</td>
<td>000</td>
</tr>
</tbody>
</table>
### GOAL/ASPIRATION LEVEL

<table>
<thead>
<tr>
<th>NO GOAL</th>
<th>COMPROMISE GOAL</th>
<th>CHALLENGING GOAL</th>
<th>DIFFICULT GOAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>$4350</td>
<td>$4547</td>
<td>$4844</td>
<td>$5290</td>
</tr>
<tr>
<td>(916)</td>
<td>(775)</td>
<td>(382)</td>
<td>(620)</td>
</tr>
</tbody>
</table>

**TABLE 3a.** Means (standard deviations) of AVERAGE PROFIT by transaction.

<table>
<thead>
<tr>
<th>NO GOAL</th>
<th>COMPROMISE GOAL</th>
<th>CHALLENGING GOAL</th>
<th>DIFFICULT GOAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.07</td>
<td>6.40</td>
<td>6.44</td>
<td>3.97</td>
</tr>
<tr>
<td>(2.0)</td>
<td>(2.3)</td>
<td>(2.4)</td>
<td>(2.4)</td>
</tr>
</tbody>
</table>

**TABLE 3b.** Means (standard deviations) for NUMBER OF TRANSACTIONS.

<table>
<thead>
<tr>
<th>NO GOAL</th>
<th>COMPROMISE GOAL</th>
<th>CHALLENGING GOAL</th>
<th>DIFFICULT GOAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>$29727</td>
<td>$29068</td>
<td>$31095</td>
<td>$20784</td>
</tr>
<tr>
<td>(7137)</td>
<td>(12107)</td>
<td>(11574)</td>
<td>(10504)</td>
</tr>
</tbody>
</table>

**TABLE 3c.** Means (standard deviations) of TOTAL PROFIT for the participants in the market.