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THINKING BACK ON WHERE WE'RE GOING : A METHODOLOGICAL ASSESSMENT OF FIVE DECADES OF RESEARCH IN NEGOTIATION BEHAVIOR SOME PRELIMINARY FINDINGS…

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ABSTRACT

Through a content-analysis and coding of articles published in the mainstream academic literature on negotiation behavior, this study examines the field with respect to the research methods employed. A large database of relevant publications featured in Psychinfo is being constructed in order to investigate possible trends and patterns in the research methodologies used and abandoned over the past decades. We explore issues relating to research strategy, measurement, types of respondents, data-analytical procedures etc., and address various aspects of internal, external and construct validity. Our aim is to gain insight into the dominant methodological and statistical practices that have shaped the field of negotiation, and shed light on possible gaps and trade-offs. Preliminary findings, based on a set of 862 studies, are presented.

THINKING BACK ON WHERE WE'RE GOING :
A METHODOLOGICAL ASSESSMENT OF FIVE DECADES OF RESEARCH IN NEGOTIATION BEHAVIOR

Over the past decades, the study of negotiation has been one of the most rapidly growing areas within the wide domain of applied behavioral science, gradually establishing itself as a core topic of inquiry for researchers in fields as diverse as social psychology, cognitive psychology, management and organizational behavior. As a result of the almost exponentially increasing amount of research on negotiation since the 1950s, a great deal of general overviews have seen daylight as well, exploring the main trends, traditions and paradigms that have shaped the field of negotiation as we know it today (see, for instance, Bazerman, Curhan, Moore, & Valley, 2000; Bazerman, Lewicki, & Sheppard, 1991; Carnevale & Pruitt, 1992; Lewicki, Sheppard, & Bazerman, 1986; Rubin & Brown, 1975; Smith, 1987; Thompson, 1990; Wall & Blum, 1991). By and large, these papers have adopted a thematic approach, detailing the specific topics that have emerged in the study of negotiation, and suggesting potentially fruitful avenues for future studies. For instance, Bazerman et al. (2000) have outlined how the emphasis in negotiation research has dramatically shifted from a social-psychological to a behavioral decision perspective and back.

All through this period of rapid scientific expansion, the behavioral sciences have produced an impressive arsenal of research methods. Although researchers in the area of negotiation have traditionally relied on experimental studies, they can now benefit from a rich methodological toolbox and adopt methods ranging from realistic simulations and in-field observations to mathematical modelling, case-study work, and survey research. While outlining their own methodological choices, several authors have expressed their concerns on the relative merits and limitations of various quantitative and qualitative research methods, and have discussed their possible application in negotiation research (see, for example, Breaugh & Klimoski, 1981; Brodt, 1997; Druckman, 1977; Druckman & Hopmann, 1991; Duffy & Kavanagh, 1983; Graham, 1993; Greenhalgh & Gilkey, 1993; Greenhalgh & Neslin, 1981; Greenhalgh & Roderick, 1997; Harris, 1996; Hopmann & Walcott, 1977; Klimoski, 1978; Rozelle & Druckman, 1971; Tripp & Sondak, 1992). The fact that authors like Greenhalgh & Roderick (1997) have suggested the use of psychodynamically oriented clinical methods as a potentially useful approach in the study of personality in negotiation, is highly illustrative for the widespread interest in research innovation that we are currently witnessing in this field. In a similar vein, Harris (1996) has proposed using content-analysis as an alternative to other, more mainstream techniques.

Notwithstanding this flourishing diversity, clearly combined with increasing attention from researchers in the field, scant articles have directly provided a comprehensive overview of the extant research methodologies in negotiation behavior. Moore & Murnighan (1999) though, have chronicled an expert debate on some of the major disagreements on what would be the most viable pathways to further increase our understanding of the negotiation process. As these authors summarized, different opinions have emerged on the relative merits of research in the laboratory and in the field, and on the value of using students as experimental participants. Concludingly, Moore & Murnighan (1999) posit that future research should aim to bridge disparate perspectives, that every methodology or philosophy has its value, and that different questions need to be pursued with different research methodologies. However, despite the luxury it brings about at first sight, having at one's disposal a multitude of possible research approaches has not made life much easier for contemporary researchers. As today, there is a clear lack of conclusive insight in the methodological practices and trends that have shaped the field of negotiation, as a result of which researchers might be insufficiently aware of possible methodological blind spots and trade-offs that constrain its further development. Without such insight, design choices may be as much inspired by the objective needs of the field as by the requirements and preferences of the top journals, the emphasis put on various procedures in the course programs of a particular university or business school, cultural traditions, or as Eccles & Nohria (1992) argue, sometimes even by pure fad.

Scholars working in several related organizational domains have recently expressed similar concerns, and have pointed accordingly at the necessity of conducting an assessment of the research methods employed in their respective subject areas (see, for example, Chandler & Lyon, 2001; Sackett & Larson, 1990; Scandura & Williams, 2000; Stone-Romero, Weaver, & Glenar, 1995). For instance, in a study of methodological practices of studies in the field of general management, Scandura & Williams (2000) have proclaimed :

"For management research to progress, it is important for researchers to assess the methods they employ. The impact of management studies depends upon the appropriateness and rigor of the research methods chosen. Design choices about instrumentation, data-analysis, and construct validation may affect the type of conclusions that are drawn (…). An examination of possible patterns in design and methods may provide some insights into the future development of research methodology (…). Shifts in the emphasis put on some methodological principles and not on others may fundamentally limit the conclusions that can be drawn. It seems clear that choices about the settings of organizational studies, research designs, and analyses have important implications for the accumulation of knowledge over time." *(Scandura & Williams, 2000, p.1248)*

In a similar vein, as the volume of negotiation research continues to expand, it is useful to take stock and reflect on its existing research methodologies and statistical procedures, and examine the key issues and trends in this matter. We are therefore currently in the process of conducting such assessment for the past five decades of research in negotiation behavior, based on a content-analysis of relevant peer reviewed studies featured in Psychinfo and published in the period between 1953 and 2002. Examining issues relating to research design, measurement, triangulation, various aspects of validity, reliability and statistical power, type of respondents involved, etc., our purpose is to identify the main methodological shifts and patterns that have occurred in negotiation research over the past five decades, and identify where negotiation research seems to be heading in terms of the trade-offs being made. We will not only compare and contrast different time periods, but also explore the dominant practices and possible gaps within the various content areas of negotiation behavior. As such, we hope to provide insights and recommendations on some of the major methodological controversies in the field.

We will further organize this conference paper as follows. First, we will begin by providing a brief discussion of the approach and results of two related methodological overviews, more specifically in the field of general management (Scandura & Williams, 2000) and in the field of entrepreneurship (Chandler & Lyon, 2001). Next, we will outline the methodology we used to conduct our own assessment of negotiation research, and present preliminary findings and trends based on a review and coding of 862 studies in negotiation behavior.

Evaluations of Research Methodology in Related Fields

In what can be considered a landmark study, Scandura & Williams (2000) have compared and contrasted the strategies employed in general management research in two periods, namely 1985-1987 and 1995-1997. Through a content-analysis and coding of articles from the Academy of Management Journal, Administrative Science Quarterly and the Journal of Management, they examined patterns in the use of research methods for addressing issues of "triangulation" and validity, including internal, external, construct and statistical conclusion validity (N = 774). Each study was analyzed and represented by various coding dimensions. For instance, primary research strategy (e.g. formal theory, sample surveys, laboratory studies, experimental simulation, field study,…), content area (e.g. organization theory, strategic management,…), level of the primary dependent variable, type of sample, nature of the construct validation procedure employed, primary type of data-analysis employed,… were all recorded.

The results of this study indicate some rather alarming shifts in what is being emphasized in research methods in general management, For instance, it was found that studies in the second period were indicative of lower internal validity, external validity, and construct validity. At the same time there was a significant rise in the use of field studies, leading the authors to conclude that rigor is being sacrificed for relevance in contemporary management research. It moreover appeared that researchers in a particular area mostly followed the dominant aproaches, thereby compromising the triangulation of research designs and samples necessary to avoid the flaws that are inherent when making trade-offs in research. Scandura & Williams (2000) have identified several of these trends in their review, which was meant as a reminder that researchers should be aware of how methodological choices might be affecting the cumulative body of knowledge in management research. The findings of this study are of particular importance for negotiation researchers, too, since many of them target their work towards managerial and organizational purposes. Contrasting the trends appearing in management research more general with those found in negotiation behavior might yield some additional points of interest as well.

Using a similar approach, Chandler & Lyon (2001) have conducted a review of issues relating to research design and construct measurement in entrepreneurship research over the past decade. Their analysis of articles appearing in the mainstream entrepreneurship literature (N = 416) shows a more positive picture. For instance, results indicate an increase in the emphasis on reliability and validity within this field and a significant trend toward more multivariate statistics. However, only a small proportion of studies was found to use multiple data-sources, leading the authors to conclude that many studies in entrepreneurship are likely contaminated by common method variance. The authors called for greater emphasis on multiple source data sets, the development of more elaborate theoretical models and subsequent analysis, and more longitudinal research. Their overall conclusion is pretty optimistic, as they observe that increasingly sophisticated methodology is being employed in entrepreneurship research.

It is clear that the field of negotiation behavior can equally benefit from an extensive overview of the trends and patterns in research methodologies that have emerged over the past decades. A systematic and comprehensive analysis in which such patterns are closely scrutinized can result in a number of indispensable insights for the further development of negotiation research, and can likely serve as a means to reflect on how the field is evolving.

METHOD

The Sample of Articles

One of the major challenges for this study consisted in obtaining a large and representative sample of relevant peer-reviewed publications in negotiation behavior. In this endeavor, we identified a total of 1982 articles in the Psychinfo Database using negot* or bargain* as keywords for the period 1953-2002. Since our research focuses on the study of negotiation behavior, articles resulting from this search were first screened on their relevance. When both authors agreed that an article was irrelevant, it was excluded from analysis. Interestingly, 265 articles were irrelevant for our purposes. For instance, it appeared that studies published in 'journal of sex and marital therapy' or 'journal of child psychiatry' also used 'negotiation' as a keyword while in fact they had nothing to do with the study of any negotiation process. In some cases, the term 'negotiation' is used to describe a certain type of client – therapist relationship in clinical-psychological publications ; the term 'negotiation' also appeared in psycho-analytical publications where it was used interchangeably with the classic Freudian concepts of 'transfer' and 'rapport'.

Contrary to our predecessors in other fields, who focused their search around articles published in a few selected journals during two limited, well-defined time periods, we opted for a wider variety of publications and timeperiods. We feel that reviewing a broad spectrum of articles is vital for several reasons. First, limiting our analysis to a few top-tier journals might skew our findings towards the methods that are predominant in those outlets. Landmark studies appearing in academic journals with a slightly lower impact-score would then not be included, although they often represent essential contributions to the field. Therefore, we wanted our findings to reflect the methodological dynamics of the field as a whole instead of those of the elite top three. Second, the ultimate goal of this research is to provide insights in the trends and characteristics of research in various substantive areas within the field of negotiation, and highlight differences in the methods used in, for example, studies on communication or cross-cultural aspects. We also want to contrast multiple time periods in order to obtain a more detailed and encompassing overview of the procedures that have been embraced and abandoned over time. Therefore, having a sufficient amount of cases per sub-area is desirable. For all these reasons, we felt that it is essential to represent a sample that is as exhaustive as is realistically possible, and that captures a wide range of empirical and conceptual works.

Our strategy in constructing the database was as follows. We rank-ordered all the academic journals featured in our Psychinfo search according to the number of negotiation articles they had published over the last 50 years. The journal 'Organizational Behavior and Human Decision-Making Processes', for instance, was on top of our list with a total of 87 articles. We then worked downstream, scanning journal per journal, to capture the wide diversity of research in negotiation behavior. (A list of all the journals featured in the current database is in appendix). Comments, book reviews, editorials, short research notes, or columns were not included. A significant number of articles described several separate studies with separate samples. Consistent with Scandura & Williams (2000) and Chandler & Lyon (2001), each study from an article describing multiple studies was treated as a separate data-entry. Accordingly, the results in the present stadium of our research are based on a total of 862 studies, featured in the first 20 scholarly journals on our Psychinfo list and dating back to the year 1975.

Since the field of negotiation has mushroomed so impressively during the last decades, considerable differences were found to exist in the number of articles published in these journals during subsequent periods ; Psychinfo searches revealed that 45% of the entire body of research in negotiation was carried out during the past ten years. For the purposes of the present version, we opted for a comparison of the methodological approaches in negotiation studies published during the last decade (1993-2002) with those published during a more broad preceding period, starting at 1975. We read and coded the methods sections of 338 articles for the earlier period and 524 articles for the recent period. We contrasted percentages for the two periods, and also examined the existence of linear trends.

The rough dichotomization used in the present paper should allow us to detail how the most recent – and thus most relevant to contemporary scholars – stream of research differs from preceding traditions, and how recent research has evolved from the more exploratory works. In the near future, we will work further downstream the list of journals in order to finalize a fully encompassing and complete database of research in negotiation behavior over the last five decades. This database of at least 1300 studies will allow us to further refine our conclusions and distinguish methodological trends and characteristics over various smaller periods and distinct research areas. Hence, this is why we call this paper “preliminary findings”…

Procedure & Coding

A rating form similar to other review projects in related fields (Chandler & Lyon, 2001; and especially Scandura & Williams, 2000) was developed to enable us to conscientiously code all articles. We included the relevant topics covered in both aforementioned studies, and also formulated a number of items specifically tailored towards the idiosyncracies of negotiation research. Studies were thus analyzed along various coding dimensions.

We first categorized the primary research strategy of each article. Categories included ‘formal theory / conceptual articles’, ‘laboratory experiments’, ‘experimental simulations’, ‘case studies’, ‘field studies’, ‘interviews’, ‘observational studies’, ‘computer simulations’, ‘meta-analyses’ and ‘sample surveys’. The time frame of empirical studies was categorized as either ‘cross-sectional’ or ‘longitudinal’.

Next, sample size was coded, as well as respondent characteristics (age and gender of respondents). Type of sample was operationalized as ‘psychology students’, ‘business / MBA students’, ‘other students’, ‘managers’, ‘public sector employees’, ‘private sector employees’ (non-managerial), and ‘professional negotiators’. We also included a ‘mixed’ category for samples that used both students and other respondents and a ‘not applicable’ category, e.g. for game-theoretic experiments using computer-simulations or for field-studies using secondary data.

The primary type of dependent variable was coded as ‘tangible negotiated outcomes’, ‘behavioral or decisional outcomes’, ‘attitudinal outcomes’ or ‘perceptual outcomes’. We next recorded the ‘level of analysis’ of each study, which we either coded as ‘dyadic negotiations’, ‘group negotiations’ or ‘multi-party negotiations’. Aspects of reliability and construct-validity were investigated by checking for reports of reliability estimates (e.g. cronbach’s alfa, interrater reliability,…), exploratory and confirmatory factor-analysis and number of data-sources (single or multiple). For experimental studies, we also checked for reports of manipulation checks.

Data-analytical approaches were coded as dummy-variables to be able to account for studies using several statistical techniques for hypothesis testing. Similar to Chandler & Lyon (2001), we recorded ‘univariate analysis of variance’, ‘multivariate analysis of variance’, ‘linear regression analysis’, ‘correlational techniques’, ‘non-parametric techniques and interpretative analysis’, ‘discriminant analysis’, ‘cluster-analysis’, and ‘structural equations & path analysis’.

The context or setting of each study was coded as ‘international negotiations’, ‘peace negotiations’, ‘buyer / seller negotiations’, ‘salary & job negotiations’, ‘labor & union negotiations / collective bargaining’, ‘crisis negotiations’, and ‘environmental negotiations’. Categories for ‘other’ and ‘not applicable’ were included as well, using the former e.g. for studies on liability negotiations, aspects of community research, etc., and the latter e.g. for articles presenting a general theoretical framework.

Next, every study was coded according to the focal themes or core behavioral processes under investigation. We distinguished the following categories : ‘negotiator personality and characteristics‘, ‘gender differences’, ‘cross-cultural differences’, ‘teaching and training of negotiator skills’, ‘emotions in negotiation’, ‘ethics in negotiation’, ‘communication and social cognition’, ‘negotiator rationality and bias’, ‘mathematical models and game theory’, and ‘third party influence’. With respect to the latter category, articles on mediation, arbitration, etc. were only included if they explicitely investigated the impact on the core negotiation process. Articles on alternative dispute resolution as such were omitted. Three additional categories regarded negotiation from a temporal viewpoint by coding studies either as investigating pre-negotiation processes (‘preparing and defining the game’), the negotiation phase itself (‘playing the game’), or post-negotiation processes (‘evaluating the game’). A total of thirteen process categories was thus constructed. All process categories were coded as dummy-variables to enable a more detailed classification of each article. A study could receive several codes ; e.g. a study that dealt with cross-cultural differences in the display of emotions would receive both codes 3 and 5 ; a study investigating the influence of social perception in group negotiations on post-negotiation evaluations of fairness would receive the codes 7 and 13. A study was only coded according to the temporal dimensions when it was clear enough on this aspect. Studies however that did not fit very well in the other categories only received a temporal code, e.g. studies investigating the influence of aspiration prices or opening offers. Using this procedure, every study we read could receive at least one code. No authorative taxonomy of behavioral processes in negotiation has been formulated to date ; this classification is therefore necessarily tentative and impressionistic, but should provide useful insights on trends within various substantive areas of negotiation, especially when crosstabulated with ‘primary research strategy’.

Finally, we were interested in possible trends on the level of internationalisation of negotiation research. We therefore recorded the nationality of the first author of every article, and also coded whether it was a single country study or an international collaborative project.

In an initial try-out phase, 130 graduate students in healthcare management taking a research methods course were invited (in exchange for course credits) to look up and code four articles. In order to establish the reliability of these limitedly trained coders, 100 articles were given to two different students. Results of this initial approach were dissapointingly clear. For instance, there was 13% disagreement on the sample size of studies, on type of respondents 22%, and on type of research 25%. Students disagreed in 33% of the cases in the definition of the research as longitudinal or cross-sectional (students clearly did not understand the difference), and in 35% in the description of the statistical methods employed. As expected, coding of the content of an article led to the strongest disagreement : in more than 50% of the cases the coding was dissimilar and even when the coding was similar, it was not exceptional to establish that both students were wrong (there was a very strong bias towards coding an article as the study of negotiator's personality). These findings of course raise some serious doubts on the value of involving students for coding purposes. Although this is common practice in clinical & developmental psychology, students probably differ largely in their interest in research methods, so relying on their judgment in this matter is clearly not a very good idea.

For these reasons, we decided to further limit students' involvement to the tracing and copying of articles, and leave the coding to the two authors and other faculty members. Based on a sample of 100 codings, their agreement reached between 85 and 94 percent, depending on the ambiguity of the various coding dimensions. For instance, differences in opinion on clearcut aspects such as statistical approach or level of analysis almost never occurred. By and large, disagreements mostly appeared with respect to the number of dependent variables and the number of data-sources. For instance, studies with highly complex designs are often obscure on their number of dependent variables. We therefore simplified the coding process by regarding studies with a lot of dependents as 'five or more' instead of fidgetting over their exact number. The same applies for number of data-sources, which we simply coded as 'single' or 'multiple'. Ambiguities and differences in opinion were discussed.

Finally, before proceeding to the result section, we would like to subscribe the viewpoint of Chandler & Lyon, and emphasize that "our discussion of methodology employed in previous research, and our suggestions for the future should not be construed as value-laden, but rather regarded as general observations and a manifestation of the paradigmatic development of the field.” (Chandler & Lyon, 2001, p102)

RESULTS

Basic Research Approaches in Negotiation : Primary Research Strategy, Number of Studies per Article, Level of Analysis, and Time Frame

Table 1 compares the use of various research strategies during the two periods described. On a total of 862 studies reviewed, 221 or 25.6% were purely theoretical or conceptual in nature ; 641 studies or 74.4% were empirical works. As one would expect, conducting laboratory experiments was the most popular strategy in both the recent and earlier period. Other empirical methods represent a minority. The more important question is of course on whether this situation is evolving. A series of time-based regression analyses with ‘year’ as dependent variable were therefore run to project a trend line of the proportion of studies employing each specific research strategy. Statistically significant differences were found for two strategies : regression analysis revealed a notable increase in the number of theoretical and conceptual articles and an important decrease in the number of laboratory experiments from one time period to the next. Significant increases or decreases in the use of other techniques were however not found.

Insert Table 1 About Here

These observations lend quite some food for thought. Although our findings indicate a remarkable drop in the proportion of laboratory experiments, this evolution has not led to a significant raise in the attention given to any other specific empirical technique. We observe that 10.5% of the recent studies have employed more realistic, real-life experimental simulations instead of laboratory work – as compared to 6.5% in the earlier period – but no significant linear trend on their use could be demonstrated. The use of various non-experimental empirical techniques has changed only marginally. For instance, although the use of case-studies and interviews has slightly increased, it did so by nonsignificant proportions. The amount of field studies and sample surveys has remained more or less constant throughout the years. However, our findings indicate an extensive rise in the amount of theoretical and conceptual works. The magnitude of this development became even more clear when we considered the total number of *articles* in our database (N=749) instead of the total number of separate *entries* (N=862) : it appeared that no less than 34.0% of recent peer-reviewed articles were theoretical, compared to 23.2% in the earlier period.

Although several negotiation scholars have voiced a call to arms towards using more qualitative methods, their influence on actual research behavior has thus been rather limited. The veritable boom of negotiation research that has occurred during the nineties has not very much lead to diversification of empirical research strategies. Already in the seventies, Chertkoff & Esser (1976), Hamner & Yukl (1977), and Rubin & Brown (1975) have all argued that more field studies in negotiation behavior are needed. Later, Wall & Blum (1991) have equally urged researchers to adopt research strategies with higher external validity. Druckman (1977), among others, however pointed at the considerable external constraints and hence the lack of control such studies bring about. Certainly, the debate on conducting experimental versus so-called 'real-life' studies in negotiation is already a classic one, and often the subject of fierce discussion between advocates and opponents of both approaches - Moore & Murnighan (1999) even make mention of a 'contentious harangue'. While it is not in our purpose to defend one of two camps, nor to repeat any call to arms once again, the fact that this widespread polemia has not provoked the least change is quite puzzling : field-studies continue to represent a trivial minority of about two percent. It occurs to us that this current distribution of research strategies is in a sense exemplary of the paradigmatic development of a field where there's still a lot of questions on the basic conceptual level left unanswered. The answer on how to proceed from such a situation basically stems from two distinct streams in science philosophy : one stream suggests that a scientific field should first lay a sound conceptual foundation through studies in highly controlled settings before moving to more applied work, while another viewpoint posits that scientific research should create a perpetual spiral of knowledge through the continuous and mutual exchange of real-life versus experimental findings (Benton & Craib, 2001). According to the first viewpoint, "research triangulation" or comparing findings across research methods – as is heavily advocated by Scandura & Williams (2000) – might be considered premature ; according to the second viewpoint however it is highly warranted and necessary. Looking at Table 1, it seems as if some attempts towards more diversification of empirical research strategies are being made, but this development is still very much in its infancy, and no increases on the use of non-experimental techniques are statistically significant. As the field of negotiation continues to grow, it will be vital to pay attention to whether these attempts are becoming more emanent during coming years. Certainly, as is our impression after scanning 862 studies, negotiation studies using multimethod research are virtually nonexistent. An example of an exception to this rule is a study by Graham (1993), who employed a most remarkable combination of fieldwork, interviews, laboratory simulations, and video-taped observations of actual negotiations in a study on negotiation styles in different countries.

However, we expected some crucial differences in aspects of research triangulation and diversification across the various substantive process and context areas within the field of negotiation behavior. Table 2 indicates how different research strategies are represented in the study of different types of negotiations. Chi-square tests were run to examine statistically significant relationships between the context of a study and its research approach. In the present version of this research, we regrouped certain categories since using the original ones would violate the requirements of having sufficient expected frequencies per cell.Using this correction, only 10% of cells had an expected frequency of less than five. Accordingly, a strong significant relationship between research strategy and type of negotiation was observed (?2 = 171.484 ; $p < .001$). For instance, as demonstrated in Table 2, the large majority of non-experimental empirical studies were conducted in the context of international and peace negotiations, while studies in the context of ‘buyer/seller negotiations’ and ‘salary & job negotiations’ mostly took an experimental approach.

Insert Table 2 About Here

Distribution of different research methods mostly appears to occur in the areas of international and labor/union negotiations. Our scanning of articles revealed that these represent a mix of theoretical pieces, experimental studies, field studies, and sample surveys. In future versions, we will be able to draw more refined conclusions and recommendations on these aspects, plus look at evolutions over time.

Interestingly, the overall high percentage of conceptual / theoretical articles we noted previously is not very much reflected when divided by type of negotiation : on a total of 221 theoretical articles, only 42% had to do with a specific type of negotiation, whereas 58% described a general process. Only a handful of articles had to do with crisis-negotiations ; such negotiations are probably predominantly studied from legal, political, or criminological viewpoints, hence they are not very much featured in Psychinfo. Perhaps the apparent lack of behavioral perspectives in this context opens possibilities for future psychological research.

It is equally conceivable that different methods are used in different subareas of negotiation research as conceptualized by the behavioral process / focal theme under investigation, and that one area is strongly triangulating (as we feel is certainly happening in, for instance, cross-cultural research), while another one is fully specializing towards one dominant procedure (as naturally seems to be the case in research on, for instance, negotiator rationality). However, we felt that, in the present stadium of our research, deriving meaningful conclusions for the many process categories would be problematic. Detailing how different avenues of research in negotiation behavior employ different research strategies and how this is evolving over time will therefore constitute a major point of interest in the future analysis of a complete database.

Insert Table 3 About Here

As another topic closely relating to the primary research approach in negotiation behavior, we considered the amount and the approach of separate studies reported in one article. These aspects are described in Table 3. In a review article, Wall & Blum (1991) have formulated a strong call to negotiation researchers for the replication and refinement of results, both through identical as well as through different settings and methods, as they felt that negotiation researchers were biased towards conducting single studies. To some extent, it seems like their appeal has been put to practice during the past decade. We observed a statistically significant decline in the number of empirical articles reporting only one study, linked to an upward trend towards including two, or even three or more studies. In the more recent period, 23.7% of the empirical articles contained several separate studies, as compared to only 9.1% in the earlier period. More effort has thus been exerted over the last decade in the further testing and refining of initial findings and the exploration of related hypotheses. However, this trend has not lead to more diversification of research methods. We calculated that, within one article describing several studies, follow-up analyses or replications of the results of a first study are conducted by means of the same research procedure in 95.6 % of the cases. As an example of research that does employ different research strategies and settings in subsequent separate studies, we note Harinck & De Dreu (2000). These scholars examined fixed-pie perceptions and cooperative motivation in two experiments, and then replicated their findings in an organizational field study.

With respect to the unit of analysis of negotiation studies, we observed a significant increase in the amount of research on dyadic negotiations, and a decrease in the amount of studies on team or multi-party negotiations (see Table 4). Wall & Blum (1991), in their review, already denounced the fact most studies in negotiation concern the dyad ; this approach does not reflect reality because negotiation units in the real world typically consist of groups.

Insert Table 4 About Here

These authors moreover noted that many core variables studied in negotiation research have different effects on groups than on individuals, and influences emanating from a group will also have different outcomes from those coming from an individual. In a similar vein, Carnevale & Pruitt (1992) proposed that more research on team and multi-party negotiations be conducted. Yet, since the publication of both review articles, a shift occurred towards even less group-level and more dyadic research, in other words a trend that compromises external validity with respect to the unit of analysis. Considering the fact that scholars investigating group negotiations have for long pointed at the underrepresentation of their field (see, e.g. Gruder (1971), for an early example), this evolution is pretty disturbing.

Insert Table 5 About Here

Table 5 depicts the time-frame of studies in negotiation in the last decade as compared to older research. Although slightly on the rise, the amount of longitudinal studies in negotiation research has traditionally been rather scant. On a total of 641 empirical studies coded, only 14 or 2,2 % were longitudinal. An example is Bluen & Jubiler-Lurie, (1990), who examined moderators and psychological consequences of participation in labor-management negotiations. Data in this study were collected from industrial-relations practitioners immediately before negotiations and three months later. Despite the relatively small amount of longitudinal research that has been conducted to date, it occurs that a number of relatively new and recently introduced research topics in negotiation – for instance, the study of negotiators'reputations, or effects of various types of negotiator training – allow for a longitudinal approach. In a similar vein, Lewicki (1992) has argued that more research should tackle the question on how negotiators' tactics and strategies change over time. As these questions gain importance, the need for longitudinal research will likely become apparent in the near future.

Type of Sample and Respondent Characteristics

We observed a few interesting changes in the types of samples employed in negotiation research between the two periods (see Table 6). As was the case in the earlier period, negotiation research in the last decade was mostly conducted through student populations, but the composition of these populations changed drastically.

Insert Table 6 About Here

Whereas the hightest percentage reported during the earlier period was for samples drawn from psychology student populations, researchers in the last decade mostly attracted business or MBA-students. Regression analysis revealed statistically significant linear trends for both types of subjects. In general, the total proportion of student samples in empirical negotiation studies fell from 80.5% to 74.0 %. Further on, we witness a slight signficant incline in the proportion of professional negotiators, whereas the proportionof private sector employees has declined.

Considerable differences in opinion exist on the benefits and problems of using real-life versus student populations in negotiation research. As Murnighan & Moore (1999) indicate, advocates of employing students as experimental subjects argue that many people other than experienced negotiators are actively involved in negotiation, and that getting the participation of experienced negotiators can be very expensive, difficult and time-consuming. Others argue that if the goal of research is to understand negotiator behavior, then experienced negotiators should be the proper participants for research. In their 1991 review, Wall & Blum (1991) have equally encouraged researchers to use experienced participants, and strongly suggest recruiting participants from the target population. Looking at Table 6, it seems like researchers in negotiation behavior have somewhat tried to adopt a middle-of-the-road approach in their concerns of external relevance versus practical considerations by using MBA and business students instead of psychology students. MBA-students are generally older, and since many only start to pursue their MBA-degrees after having gained a significant amount of work experience, one might consider them as more valid participants than psychology undergraduates. This finding could perhaps be interpreted as a slight rise in external validity on the level of type of sample. However, also note that the amount of negotiation research that has been conducted using practicing managers or public sector employees remains extremely limited, and it appears that there is not much evolution in this situation.

Insert Table 7 About Here

Next, the large majority of empirical studies in negotiation do not report the age nor gender of their respondents (Table 7). Significantly more studies now indicate the age of their respondents, but the proportion of studies that do not give a clear indication of the gender of their respondents has actually increased over the past years. One could argue that the term ‘undergraduate’gives a certain indication of age, but this term is a bit misleading since large age differences among undergraduate students exist between countries : for instance, a typical Belgian or Dutch graduate student is about 21 years old, while we encountered studies from other countries reporting graduate populations with a mean age of 27 years. Clearly, more effort could be exerted in providing a detailed specification of respondent characteristics, since this allows a reader to better interprete and situate the findings of a study. Regression analyses for the valid entries, then, revealed that there was no difference in the age of respondents, with mean respondent age remaining at about 27 years in both periods. A statistically significant increase in the percentage of female respondents was however observed, indicating that respondent samples in recent negotiation research are more evenly distributed in terms of gender.

Aspects of Construct Validity and Measurement Approach

As summarized in Table 8, a massive and statistically significant increase occurred in the proportion of empirical studies that report a procedure for establishing the reliability of their findings, with Cronbach's alfa and various estimates of interrater-reliability being the most frequently applied measures. Moreover, for the subset of experimental studies, we observe a significant rise in the amount of studies that explicitely report checks for the manipulations of their independent variables.

Insert Table 8 About Here

Substantially more emphasis is thus being put in recent negotiation research on controlling for the internal and construct validity of studies. This is of course an outright positive shift, one that is moreover in line with some methodological suggestions made in previous review articles. Wall & Blum (1991), for instance, urged researchers to adopt more rigorous manipulation checks, and offered the suggestion that manipulations within experiments be equivalent with one another. Also, both Wall & Blum (1991) and Duffy & Kavanagh (1983) pointed at qualitative differences in the manipulation of independent variables as one of the principal shortcomings in negotiation research, since such differences create unwanted confounds. It seems that, during the past decade, more attention has indeed gone out to examining the adequacy of experimental manipulations. However, the fact that, despite this increase, about 70% of experimental studies still refrain from reporting such checks is striking, and open for several interpretations. For instance, perhaps one could argue that many negotiation experiments have employed manipulations that are so straightforward and clearcut – e.g. one group receives a BATNA and another one does not – that there is no need for any further inquiries on whether this manipulation actually succeeded or not. Still, as contemporary research increasingly adopts independents that are 'intangible' (e.g. when inducing positive or negative affect, or when measuring social orientation), this high non-report percentage may however evoke some serious frowns.

As for other topics related to measurement approach, we included the primary type of dependent variable and the number of data-sources per study (see Table 8). Both for the recent and earlier period, studies that measured 'tangible negotiated outcomes' and ‘behavioral or decisional outcomes’ take up the highest percentages, although we note a significant decrease for both types of dependents. On the other hand, the proportion of studies that employ ‘perceptual outcomes’ as the primary type of dependent variable has almost quadrupled. Next, although we expected few negotiation studies to use multiple data-sources, time-based regressions revealed that there was a slight upward trend towards conducting such studies. A classic example is Neale & Northcraft (1986), who compared data gathered from a sample of professional corporate real-estate negotiators with secondary data from an amateur student sample gathered in a previous study (Bazerman, Magliozzi, & Neale, 1985).

Aspects of Statistical Analysis : Data-Analytical Approaches, Sample Size, and Number of Dependent Variables

Several aspects of statistical power are summarized in Table 9. Both for the recent and the earlier period, analysis of variance was the most widely used statistical technique. Results however indicate significant trends towards less univariate and more multivariate statistics ; the use of linear regression techniques also rose.

Insert Table 9 About Here

The use of both correlational and non-parametric techniques remained constant. During the recent period, about half of the studies relied on only one single statistical procedure for hypothesis testing. Comparisons between the two periods however revealed a decreasing trend in the proportion of studies that do so, accompanied by a significant increase in the proportion of studies that used at least three different statistical techniques. Most studies in negotiation behavior use one, two, or three dependent variables - each of these categories now take up slightly above 20% of empirical studies – although this practice occurred to a lesser extent during the recent than during the earlier period. Regression analysis revealed that there was a downward trend in the amount of studies that use a single dependent variable ; the amount of studies using three dependents also fell. However, we observe a significant increase in the amount of studies that investigate large amounts (five or more) of dependent variables. Finally, no significant differences were found between mean sample size for the two periods. Median sample size was 110 for the last decade and 96 for the earlier periods.

Taken together, the above findings indicate that increasing attention is being directed towards issues of statistical power. It appears that research conducted during the past ten years exhibited more sophistication in the way hypotheses are formulated, variables are conceived of, and data are analyzed. Contemporary negotiation researchers tend to include more dependents in their designs ; they use more statistical techniques to scrutinize their data ; they also use less simple univariate models. Given this development, it is however surprising to notice the low attention given to path-analytical techniques. Since contemporary negotiation researchers tend to adopt more elaborate designs and more variables, more effort could perhaps be excerted in investigating complex causal chains, for instance through using structural equations.

Of course, one can argue that, to a large extent, the above improvements have been made possible through the development of highly elaborate statistical packages such as SPSS. However, stating that the developments we observe on the level of analytical sophistication – combined with the aforementioned higher emphasis on construct validity – are self-evident and to be expected as the natural development of a scientific field in motion, would be a harsh oversimplification. It is not just 'normal' to observe that recent research is conducted in a more rigorous way than was the case in earlier times : the seminal overview article by Scandura & Williams (2000) actually demonstrated that exactly the opposite was occurring in research in management more general. Scandura & Williams wrote that management research was sacrificing academic rigor for practical relevance on a massive scale, and expressed their concerns on what struck them as "an apparent lack of preoccupation with *any* type of validity". For negotiation research though, developments on the level of statistical conclusion validity seem quite favorable.

Issues of Internationalisation

The international distribution of any research area is an important indicator of both its general scientific impact in the world and the maturity of its paradigms. Internationalisation can moreover be an essential impetus for the further development of a field, as scholars from different cultures and research traditions can question each others assumptions, and bring about different ideas on how certain research questions should be addressed. Geographic diversity can likely lead to more diversity on the level of research approach. In this light, we observe that, although most of the extant peer reviewed research in negotiation has been conducted in the United States, the amount of research that is being carried out in other countries is steadily increasing (see Table 10). Of recent studies in negotiation research, we observe that 12.6% resulted from international collaborative projects, mostly among American and European researchers. Although we found no sources to compare this number with other fields, it appears to us that this a very promising evolution.

Insert Table 10 About Here

DISCUSSION

In this paper, we have attempted to systematically assess the current state of research methodology in the field of negotiation behavior. Such an analysis is vital in order to obtain a clear picture of how the field is evolving and should serve as a means to, as the title of this paper indicates, 'think back on where we are going'. In this first version, we have examined and categorized the methods sections of a total of 862 relevant studies published in a wide array of peer reviewed journals, and compared the methodological trends and practices employed in negotiation research during the past decade (1993-2002) with those employed in earlier research, dating back to 1975. The results of our analysis revealed a number of shifts in what is being emphasized in contemporary negotiation research. Some of these shifts are in the line of general expectations, while some others are rather surprising. For those developments that confirm prior expectations, having obtained clear quantitative data will likely add weight and detail to the ongoing discussions. Similarly, some of the observed developments are outright positive, while others are rather alarming ; at the very least, they are subject to academic self-reflection.

As our analysis demonstrated, the methodology employed in negotiation research is becoming increasingly sophisticated. Important improvements have been made on issues of internal validity, construct validity, and statistical analysis. More effort is being exerted in establishing the reliability of measures, and in checking the adequacy of experimental manipulations, although a large proportion of studies still do not report these aspects. More statistical procedures are being applied per study. Moreover, we observe a rise in the number of dependent variables, accompanied by a rise in the use of multivariate statistics. It appears that data in current negotiation studies are analyzed with closer scrutiny, although this development might be the result of both greater attention and widespread availability of user-friendly software packages. Equally promising for the further development of negotiation research is the high amount of international collaborative research projects that have recently been undertaken.

However, a number of concerns should be formulated as well. Although many authors have argued for more diversification of research strategies, the field of negotiation is still primarily focusing on a few dominant research strategies. Although we observe a drop in the proportion of laboratory experiments, this has not (yet) led to an increased attention for non-experimental empirical techniques. Rather, we observe that substantially more emphasis is being put on theoretical and conceptual articles. It is yet to be awaited if this theorizing will lead to new and innovative streams of research. By and large, researchers in negotiation behavior continue to specialize towards a limited amount of methodological approaches. It moreover appears that they are highly succesful in this specialization, but one should be aware that such practice can have serious repercussions as well. Certainly, the strikingly low amount of field studies being conducted, and the total lack of evolution in this matter, is disconcerting. The major threats for the future development of negotiation research are situated on the level of context validity, and the replication of findings through different methods, different settings, and different types of participants. With respect to the types of samples, we observe that MBA-students are being used rather than psychology students. The increase in the use of professional negotiators is also promising. However, the amount of real-life participants in negotiation research remains rather limited, and student populations continue to take up the large majority of samples in negotiation research. Since much of the research and theorizing in negotiation claims relevance for managerial processes, our finding that only 5% of studies use practicing managers as participants is not exactly good news. Although we acknowledge the remarks made by Moore & Murnigham (1999) on the value of using student versus real-life samples and on the difficulties of composing the latter, it appears to us that this situation is subject to improvement. In a similar vein, the remarkable drop in the amount of studies on group and multi-party negotiations does not bode well for the external validity of research in negotiation behavior.

As we compare the findings of our study to those of Scandura & Williams (2000), various trends and practices occurring in the area of negotiation are contrary to those found in general management. While the field of general management seems to put increasing emphasis on external validity and practical relevance at the expense of rigor and sophistication, exactly the opposite seems to be the case in negotiation research. The question on how to evaluate such developments depends on the criteria one uses to define the ultimate merits of research. We believe that both those who assert that research should help negotiators in the real world, and those who feel that the pure discovery of new insights and knowledge is a respectable goal as such, make valid claims. However, our position is that in scientific research, as well as in everyday life, the keyword is balance. Based on all classes of evidence we gathered in this study, it seems that speaking of 'balance' in the field of negotiation is, as yet, something of an overstatement. Still, to use an analogy : in the fine arts, those who study painting or sculpturing are not merely evaluated on the quality on their work, but first and foremost on the evolution of their skills. When working hard, a moderate painter can so obtain higher grades than an excellent one whose development has come to a standstill. Using this criterion, it appears that the field of negotiation research has already covered quite some distance, but there is still a long road ahead.

Where does our research go from here ?

Although the findings presented in this preliminary version revealed a number of important findings on the general dynamics of negotiation research, much work remains to be done. We feel that further refinements need to be made in order to detail developments in the various substantive and content areas of negotiation behavior. More journals will be included in our database ; more timeperiods will also be examined. Using this procedure will allow us to present a thorough picture and formulate more specific recommendations for specific streams of research. In the meantime, any comments or suggestions from the global negotiation research community will be highly welcomed by the authors.

To be continued…

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APPENDIX : LIST OF ACADEMIC JOURNALS INCLUDED IN THE CURRENT DATABASE

Organizational Behavior and Human Decision Processes
Journal of Personality and Social Psychology
Journal of Conflict Resolution
Group Decision and Negotiation
International Journal of Conflict Management
Negotiation Journal
Journal of Experimental Social Psychology
Journal of Applied Psychology
Journal of Applied Social Psychology
Behavioral Science
European Journal of Social Psychology
Journal of Social Psychology
Personality and Social Psychology Bulletin
Psychological Reports
Journal of Economic Psychology
Academy of Management Journal
Human Relations
Social Psychology Quarterly
Journal of Organizational Behavior
Journal of Applied Behavioral Science
Personnel Psychology
Psychology and Marketing
Basic and Applied Social Psychology

TABLE 1

Research Strategies in Negotiation [a]

Research Strategy	Earlier Period	Recent Period
Formal Theory / Conceptual Article	21.6 %	28.2 % **
Case Study	2.4	4.2
Interview	0.9	1.5
Observation	0.0	0.8
Laboratory Experiment	61.8	46.4 **
Experimental Simulation	6.5	10.5
Field Study	2.1	2.5
Computer Simulation	0.3	0.4
Meta-Analysis	0.3	1.5
Sample Survey	4.1	4.0

[a] $N_{total} = 862$; $N_{early} = 338$; $N_{recent} = 524$. Time-based regression analysis revealed a significant linear trend in the direction of the proportion ; ** $p < .01$

TABLE 2

Research Strategy by Type of Negotiation [a]

	Context or Type of Negotiation			
Research Strategy	International and Peace Negotiations	Buyer / Seller Negotiations	Salary & Job Negotiations	Labor / Union Negotiations
Theoretic / Conceptual Articles	44	32	3	8
Laboratory Experiments	7	216	47	34
Experimental Simulations	11	39	7	5
Case Studies, Interviews, Observations, and Field Studies	21	9	5	12
Sample Surveys	6	14	3	9
Total	89	310	65	68

[a] Crosstabulations are run with N = 532 ; the categories ‘crisis negotiations’, ‘environmental negotiations’, ‘other negotiations’ (e.g. social negotiations, liability negotiations, community negotiations), and ‘not applicable’ are omitted in this analysis ; cells represent absolute frequencies.

TABLE 3

Number of Studies Reported in One Article [a]

Number of Studies	Earlier Period	Recent Period
One	90. 9 %	76.3 % **
Two	8.3	17.1 **
Three or more	0.8	6.6 **

[a] Here N does not refer to the total number of empirical *studies* (641), but to the number of empirical *article*s scanned, hence in this analysis N_{total} = 528 ; N_{early} = 241 ; N_{recent} = 281. Time-based regression analysis revealed a significant linear trend in the direction of the proportion ; ** $p < .01$

TABLE 4

Level of Analysis [a]

Level of Analysis	Earlier Period	Recent Period
Dyadic Negotiations	69.6 %	81.4 % **
Team or Multi-Party Negotiations	30.4	18.6 **

[a] $N_{total} = 641$; $N_{early} = 265$; $N_{recent} = 376$. Time-based regression analysis revealed a significant linear trend in the direction of the proportion ; * $p < .05$; ** $p < .01$

TABLE 5

Time Frame of Studies [a]

Time Frame	**Earlier Period**	**Recent Period**
Cross – Sectional	98.9 %	97.1 % **
Longitudinal	1.10	2.9 **

[a] N_{total} = 641 ; N_{early} = 265 ; N_{recent} = 376. Time-based regression analysis revealed a significant linear trend in the direction of the proportion ; ** $p < .01$

TABLE 6

Type of Sample [a]

(A) Type of Sample	**Earlier Period**	**Recent Period**
Psychology Students	37.0 %	14.5 % **
Business or MBA students	13.7	38.3 **
Other or Non-Specified Students	29.8	21.2 *
Professional Negotiators [b]	2.3	4.8 *
Managers	3.4	5.1
Public Sector Employees	1.5	2.9
Private Sector Employees	2.3	.8 *
Mixed	4.6	6.2
Not applicable	5.3	6.2

[a] $N_{total} = 641$; $N_{early} = 265$; $N_{recent} = 376$. Time-based regression analysis revealed a significant linear trend in the direction of the proportion ; * $p < .05$; ** $p < .01$

[b] "Professional negotiators " are interpreted as 'all those whose core job is to negotiate'. We distinguish 'managers' as another class of experienced, real-life subjects who need to rely on negotiation skills as as a necessary, but not exclusive part of their job.

TABLE 7

Respondent Characteristics [a]

(B) Age of Respondents	Earlier Period	Recent Period
Not Reported	92.8 %	79.5 % **
Mean Age	27.5	27.7
Standard Deviation	9.32	6.97
Median Age	26	26
Range	12 - 44	19 – 50
(C) Gender of Respondents		
Not Reported	61.1 %	73.9% **
Average % of Female Respondents per Sample	29.3	44.1 **

[a] N_{total} = 641 ; N_{early} = 265 ; N_{recent} = 376. Time-based regression analysis revealed a significant linear trend in the direction of the proportion ; ** $p < .01$

TABLE 8

Construct Validity & Measurement Approach

Characteristic	**Earlier Period**	**Recent Period**
Construct Validation		
Reports of Reliability Estimates	14.3 %	29.9 % **
Reports of Manipulation Checks	20.4	28.3 *
Exploratory Factor Analysis	3.4	4.5
Confirmatory Factor Analysis	0.4	1.9
Type of Dependent Variable		
Tangible Negotiated Outcomes	39.5 %	30.1 % *
Behavioral or Decisional Outcomes	50.0	44.4 **
Attitudinal Outcomes	6.0	9.4
Perceptual Outcomes	4.4	16.1 **
Number of Data-Sources		
Single	95.3 %	92.1 % *
Multiple	4.7	7.9 *

[a] $N_{total} = 641$; $N_{early} = 265$; $N_{recent} = 376$, except for reports of manipulation checks $N_{total} = 523$, $N_{early} = 230$ and $N_{recent} = 293$ (labo studies and experimental simulations included only). Time-based regression analysis revealed a significant linear trend in the direction of the proportion ; * $p < .05$; ** $p < .01$.

TABLE 9

Aspects of Statistical Analysis [a]

Characteristic	Earlier Period	Recent Period
Data-Analytical Approaches for Hypothesis Testing [b]		
Univariate Analysis of Variance	72.1 %	60.4 % **
Multivariate Analysis of Variance	8.3	13.6 *
Regression Analysis	9.8	16.8 **
Correlational Techniques	23.4	24.2
Non-Parametric / Interpretative Techniques	24.9	23.7
Canonical Analysis (Discriminant)	1.5	0.5
Structural Equations & Path-Analysis	2.6	2.7
Number of Statistical Techniques per Study		
One	59.8 %	51.8 % **
Two	30.5	31.1
Three	8.2	13.8 **
Four or More	1.6	3.3

[a] $N_{total} = 641$; $N_{early} = 265$; $N_{recent} = 376$. Time-based regression analysis revealed a significant linear trend in the direction of the proportion ; * $p < .05$; ** $p < .01$

[b] Statistical techniques were coded as dummy variables to be able to account for multiple techniques in one study ; total percentages therefore exceed 100 for this aspect

TABLE 10

Aspects of Internationalisation [a]

Characteristic	**Earlier Period**	**Recent Period**
Nationality of First Author		
USA	87.3 %	74.2% **
Canada	2.7	3.2
Australia	0.3	1.9
UK	0.9	1.9
Benelux	1.5	7.3 **
France	.6	1.0
Germany	3.8	1.7
Scandinavia	0.0	4.2 **
Spain & Italy	0.0	0.6
Asia & Middle-East	3.0	4.0
One-Country Studies	95.9	87.4 **
International Collaborative Research	4.1	12.6 **

[a] $N_{total} = 863$; $N_{early} = 338$; $N_{recent} = 524$. Time-based regression analysis revealed a significant linear trend in the direction of the proportion ; * $p < .05$; ** $p < .01$