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An Empirical Investigation of Perceptual Incongruence Between Sales Managers and Salespeople as to Sales Force Control System Application

Jozée Lapierre[*]*, Bernard Sinclair-Desgagné*[†]

Résumé / ***Abstract***

Cette étude a pour objet de tester empiriquement l'instrument de contrôle développé par Oliver et Anderson (1994) sur deux échantillons: gestionnaires de la force de vente et représentants de la force de vente dans trois industries canadiennes à haut contenu technologique. Les résultats montrent que l'instrument est mieux adapté à l'échantillon des représentants des ventes et, tel qu'attendu, les perceptions des représentants des ventes et des gestionnaires de la force de vente en ce qui a trait aux trois niveaux du système de contrôle – système global, composantes et énoncés – effectivement diffèrent. Il n'y a aucune ambiguïté en ce qui concerne les deux premiers niveaux. Cependant, on trouve un certain accord entre les deux groupes au troisième niveau. Enfin, les résultats montrent que seules les hypothèses énonçant des perceptions similaires entre les deux groupes ne sont pas confirmées.

Mots clés : systèmes de contrôle, représentants des ventes, gestionnaires de la force de vente, similarités, différences.

This paper builds on the foundation laid by Oliver and Anderson (1994) and empirically tests their control instrument using two samples: sales managers and salespeople in three Canadian high-tech industries. The results reveal that the instrument is better suited to the salesperson sample and, as expected, the perceptions of salespeople and sales managers regarding the three-level control system – overall system, components and items – do effectively differ. There is no ambiguity as far as the first two levels are concerned. However, there is some agreement between both groups at the third level. Note that only the hypotheses expecting similar perceptions between the two groups do not bear out.

Keywords: *control systems, salespeople, sales managers, similarities, differences.*

[*] Jozée Lapierre, École Polytechnique, C.P. 6079, Succursale Centre-Ville, Montréal, Québec, Canada, H3C 3A7, Tel: (514) 340-4711 (5864), Fax : (514) 340-4173, jozee.lapierre@polymtl.ca

† Bernard Sinclair-Desgagné Ph.D., professor HEC Montréal.

1. INTRODUCTION

Effective management of a company sales force is crucial to successful marketing of complex high-tech products and services. However, nothing is known about the perceptual differences of the two key actors, i.e. salespeople and sales managers, regarding sales control mechanisms or about the extent of those differences. While the marketing-based literature of the last two decades includes large numbers of studies on theoretical mechanisms (behavior versus outcome) and the structure of these mechanisms and has also touched on their antecedents, no study has yet integrated the perceptions of both sets of actors. The previous body of research is consistently limited to the separate viewpoint of either salesperson or sales manager. This restrictive perspective has been discussed by several authors, who state that "future research" should encompass the viewpoints of both groups (Cravens et al., 1993; Oliver and Anderson, 1994; Baldauf et al., 2001). It is critically important that senior sales executives grasp how and how well salespeople and sales managers alike understand a comprehensive control system and the components of that system. This understanding is a first step towards reducing perceptual discrepancies and may lead to improved personal results and organizational results as well.

Sales managers use control systems to evaluate, monitor, direct and reward the way in which salespeople carry out their responsibilities (Anderson and Oliver, 1987). Control innately evokes a situation where one party is subjected to a mechanism and the other wields it. When it comes to control in a sales context, the agency theory has proven useful in improving our understanding. This theory focuses on the analysis and optimal design of contracts between a principal (sales manager) and the agents (salespeople) to whom the principal delegates decision-making authority (Krafft, 1999). The agency theory assumes uncertain sales environment and information costs, which are typical restrictions in the high-tech world (Mohr, 2001 p.7) which complicate the matter of monitoring salesperson behavior. It also solves two problems often encountered in sales environments: the agency problem and the risk-sharing problem. The former arises when principal and agents pursue divergent

goals, the latter when the principal and agents adopt a different attitude towards the risk (Eisenhardt, 1989). Thus, the premises of the agency theory imply that salespeople and sales manager harbor different attitudes about control mechanisms. Our contention is therefore that sales managers and sales people do not quite see eye to eye regarding the application of control systems.

Considerable literature has been devoted to understanding salespeople's and sales managers' relational problems stemming from the agency theory rationale. Those studies focus mainly on three themes: trust and communication (general relationship) between the aforementioned parties (Sager, 1999; Flaherty and Pappas, 2000; Johlke and Duhan, 2001), salesperson job satisfaction and performance appraisals (Challagalla and Shervani, 1992; Shoemaker, 1999; Pettijohn et al., 2000) and salespeople job involvement (Lassk, 2001). Although these issues bear on the notion of perceptual incongruence between two groups, salespeople and sales managers in the case at hand, they do not specifically address the parties' perceived application of a sales force control system. As a result, sales force studies are fundamentally limited in that they focus either on the composition of control systems (Cravens et al., 1993; Oliver and Anderson, 1994; Challagalla and Shervani, 1996; Krafft, 1999; Rouziès and Macquin, 2002) or on the relationship between salespeople and sales managers (Shoemaker, 1999; Flaherty and Pappas, 2000; Pettijohn et al., 2000; Johlke and Duhan, 2001). Indeed, they never examine how the two groups perceive the same control system or the strength of their perceptions. This paper intends to investigate this issue by examining the perceptual differences regarding the application of control systems, differences hinted at by the agency theory.

We further intend to respond to two appeals by Oliver and Anderson (1994), who suggest surveying managers in order to contrast the information provided by salespersons and to expand the number of industries surveyed. We build on the foundation laid by Oliver and Anderson (1994) in three ways. First, we empirically test their measuring instrument with both salespeople and sales managers. To do this, we reworded the items for the sales manager sample. Second, we use

confirmatory factor analysis (CFA) to confirm the structure established via exploratory factor analysis. Third, we conduct both surveys in three high-tech sectors. One of our study sectors is similar to the electronic components industry surveyed by Oliver and Anderson (1994). Extending this line of thought, our study pursued two specific objectives. We sought first to explore the perceptions of salespeople and sales managers regarding the application of a sales force control system within their own organization. Our second objective was to identify the similarities and differences in their respective understanding of the control systems that govern them.

In the next section, the background literature is reviewed. In section 3, hypotheses pertaining to the perceptual differences of the two sets of actors are proposed. In section 4, the research methodology is detailed. Section 5 presents and discusses the study findings. In section 6, we conclude this research by highlighting the managerial implications of our results, the limitations of this study and possible research avenues for the future.

2. BACKGROUND LITERATURE

A large body of literature on sales forces has been produced over the last two decades. Nine articles prove to be the most pertinent for this study (Cravens et al., 1993; Oliver and Anderson, 1994; Challagalla and Shervani, 1996; Darmon, 1998; Krafft, 1999; Sager, 1999; Pettijohn et al., 2000; Baldauf et al., 2001; Rouziès and Macquin, 2002). These articles all inquire into control systems or else relationships between salespeople and their managers and thus provide solid ground for comparison. Cravens et al. (1993), Oliver and Anderson (1994), Darmon (1998), Krafft (1999) and Rouziès and Macquin (2002) explore the control system as a whole, whereas the other authors address such matters as salespeople performance and job satisfaction (Challagalla and Shervani, 1996; Pettijohn et al., 2000; Baldauf et al. 2001) and the general relationship between upper management and salespeople (Sager, 1999). This article is concerned with the control system seen as a whole.

Each study utilizes different control dimensions or measures. We borrowed our variables from Oliver and Anderson (1994) because they are the most complete, we find, and therefore the most appropriate for our purposes. Nevertheless, most authors who have focused on the overall control system have used three categories of dimensions: monitoring, performance and compensation, as also defined by Oliver and Anderson (1994). The key informants used were either salespeople (Oliver and Anderson 1994; Challagalla and Shervani, 1996; Pettijohn et al., 2000; Rouziès and Macquin, 2002) or sales managers (Cravens et al., 1993; Krafft, 1999; Baldauf et al., 2001). Since the matter at hand is perceptual discrepancies, we deemed it essential to investigate the perceptions of both parties.

The comparison revealed a fundamental gap in the existing literature: no previous research on sales force control systems comprises the two key informants, salespeople and sales managers. Moreover, no study integrates the perceptions of sales managers and salespeople about a three-level control system, where level 1 represents the overall control system, level 2 represents its components (traits) and level 3 represents the respective measures of each component. Consequently, this article is an original contribution to this field of study. The problem becomes more acute against the backdrop of the turbulent, changing business environments (Babakus et al., 1996) that shape today's high-tech organizations. The importance of using a three-level control system for our study further stems from the fact that perceptual discrepancies and similarities may occur between sales managers and salespeople at any of these levels.

3. HYPOTHESES

3.1 Three-level control system

The rationale of the agency theory is relevant to this study, for it argues that to reduce agency problems, principals must develop contracts (control system) that help bring the interests of agents and principals into closer alignment. The contract can be behavior- or outcome-oriented (Oliver and

Anderson, 1994). Taking the agency theory as our canvas, we want to discover how both groups perceive the control system when sales managers develop these contracts for their salespeople. What is important in this research is not the behavior to outcome-based control system spectrum, but its inner composition in order to isolate the different views of salespeople and sales managers.

In light of Sager's (1999) analysis, we can safely assume that salespeople and sales managers do not see eye-to-eye when it comes to sales practices. Sager addresses the important issue of why salespeople are dissatisfied with their job. He proposes six answers, all of which focus on the differences in how salespeople and upper management view work success. Those reasons are: the boundary-spanning role salespeople play, the bottom-line focus, the time horizon, the opinion of salespeople, the focal perspective and the changes in sales force composition. Without explaining Sager's answers to salesperson dissatisfaction in the workplace, the example that follows illustrates his line of thought. A salesperson might view establishing lasting relationship with a potential client and winning a new sales contract as equally beneficial to company well-being, whereas the contract aspect might be the sole interest of management. Thus, the two actors disagree on what is important to a company in terms of sales force control systems. Consequently, the models representing them must necessarily reveal significant differences. If the models are different, we can speculate that they will be different at all three levels of our conceptual framework for the control system. Pettijohn et al. (2000) also conclude that salespeople and sales managers disagree on the criteria used in performance appraisals, implying that the two parties perceive the criteria differently. Sales managers and salespeople can therefore be expected to harbor differing perceptions of control system components. The same can be suggested regarding the items used to measure the dimensions: sales managers and salespeople assess them differently. Obviously, sales managers and salespeople inherently disagree about sales force control systems because the former apply them, while the latter are subject to them.

The net effect of control systems is conveyed to salespeople (Oliver and Anderson, 1994) and thus they should indeed perceive them differently than sales managers. This prompts the following three hypotheses:

H1 The models representing the perceptions of sales managers and salespeople as to the application of a comprehensive sales force control system show significant differences.

H2 Salespeople and sales managers perceive the components of the control system differently.

H3 Salespeople and sale managers have different perceptions of the items that measure the individual component of a sales control system.

Unless the first hypothesis bears out, the other two will fail as well since they derive from H1. In that case, the goal of this paper would not be met. If the models are in fact different, the second hypothesis can be tested. Then, if the component variables are perceived differently, the third can be tested.

3.2 Similarities and differences in the perception of control system components

The following subsections present two types of hypotheses classed in the monitoring and performance categories. The hypotheses in the first category compare the degree of similarity or difference in the way salespeople and sales managers perceive a given component. Those in the second category identify which component is the least or most important in a control system from both parties' point of view. Note that some of the hypotheses in the second group are exploratory given the small body of literature to call on.

3.2.1 The monitoring category of control systems

Salesperson supervision refers to the type of control (behavior- or outcome-based) to which salespeople are subject. Supervisory control includes the provision of information and the administration of reinforcements (Challagalla and Shervani, 1996). These authors studied the effects of different types of supervisory controls on salesperson performance and satisfaction. According to their findings, "supervisors who provide goal information and feedback are likely to convey effectively their expectations to salespeople" (p.96). Therefore, salespeople can be assumed to perceive proper supervision as being constructive. The choice of the appropriate control systems remains the sales manager's responsibility, however. The ambiguity residing in the proper choice of supervisory control has been extensively researched (Cravens et al., 1993; Oliver and Anderson, 1994; Challagalla and Shervani, 1996; Krafft, 1999). Sales managers are often perplexed when having to choose an effective control system. Krafft (1999) noted that although the proper design of sales force control systems is of vital interest for many companies, it is a difficult task for sales managers because they must combine a huge number of different control elements. Therefore:

H4 a) Salespeople and sales managers perceive differently the supervision component of a given control system where b) salespeople perceive that component as being more important than do sales managers.

The evaluation component refers to the way sales managers evaluate a salesperson's performance. It takes account of what sales managers choose as their evaluation criteria and what criteria they believe make for a good employee. In short, this component relates to the usage and observations of performance appraisals. Larson (1984) states that feedback about performance is an integral component of any organizational control system. DeCarlo and Leigh (1996) and Morris et al.

(1991) also support this argument and contend that the evaluation process may be among the sales manager's most important job responsibilities. As stated by Pettijohn et al. (2001), the predominant appeal of the performance appraisal stems from the widely held belief that it can provide numerous organizational benefits. Elmuti et al. (1992) argue in fact that performance appraisals are typically used in organizations to (1) make decisions regarding matters such as merit pay, promotions, transfers, etc. and (2) identify areas for employee growth and improvement.

According to Pettijohn et al. (2001), performance appraisals are often described as the "job managers love to hate." Their study was intended to provide sales managers with information about enhancing the benefits of such appraisals when evaluating personnel and clearing up their negative impressions about the process. The authors mention that sales managers may have unresolved issues about how often appraisals should be conducted or the criteria that should be used. This implies that sales managers have a negative perception of that component. On the other hand, the authors' findings indicate that salespeople have mostly positive feelings about the evaluation process, which they too deem important for their organization and for themselves. Therefore:

H5 a) Salespeople and sales managers perceive differently the evaluation component of a given control system where b) salespeople perceive that component as being more important than do sales managers.

H6 From a sales manager's point of view, performance evaluation is the least important component of a control system.

3.2.2 The performance category of control systems

The performance category of control systems comprises three measures: the use of tangible (objective) outputs, the use of tangible inputs and the use of intangible inputs (Oliver and Anderson,

1994). The relative weight of these dimensions is determined by the type of control that sales managers exert over their salespeople, i.e. a behaviour-oriented or outcome-oriented system. Numerous studies have focused on the components (or criteria) that should be used in performance evaluations (Challagalla and Shervani, 1996; Pettijohn et al., 2000; Pettijohn et al., 2001). DeCarlo and Leigh (1996) contend that the criteria used in assessing performance are regarded as critical because they form the basis for a sales manager's evaluation of a salesperson and may influence the salesperson's acceptance of the evaluation. Jackson et al. (1995) point out that little is known about the current bases used to evaluate salespeople. However, all three criteria should play an important role in performance appraisals (Patton and King, 1985; Oliver and Anderson, 1994; Wanguri, 1995).

The use of objective outcomes in the evaluation process is generally well perceived by sales managers. Babakus et al. (1996) note that sales managers often focus solely on the outcome aspect of performance. Sager (1999) argues that one reason why salespeople and sales managers are not a "match made in heaven" is the bottom-line focus, which denotes stronger emphasis on net income (use of objective outputs) handed down by upper management. According to Sager (1999), some salespeople feel that their existence as employees rests on achieving target net figures. This implies that the performance aspect is not correctly diagnosed, according to salespeople. The findings of Pettijohn et al. (2001) indicate that attainment of sales objectives and creation of new account sales are the criteria that salespeople would most like to see eliminated from the evaluation process. According to the authors just cited, salespeople believe that these factors are outside their control and should not enter into performance appraisals. That being said, it can be observed that sales managers take comfort in sales numbers when reporting to senior management, whereas salespeople dread that dimension of their evaluations. Therefore:

H7 a) Salespeople and sales managers perceive differently the use of objective outputs in a given control system where b) sales managers perceive them as being more important than do salespeople.

H8 From a salesperson's point of view, the use of objective outputs is the least important component of a control system.

The next component, use of tangible inputs in the evaluation process, refers to the "measurable" activities salespeople perform in doing their work. The last component, the use of intangible inputs, refers to the attitudes, abilities and effort salespeople display in doing their work so as to build lasting relationships with their clients. Both of these dimensions relate to input/behavioral criteria, which translate into selling activities (e.g. using technical knowledge during presentations and showing initiative). Although they may not generate immediate results, they are necessary to produce outcomes (Baldauf et al., 2001). Researchers using salespeople as their unit of analysis and key informants point out that these criteria are preferred over output criteria (Oliver and Anderson, 1994; Challagalla and Shervani, 1996; Pettijohn et al., 2000; Pettijohn et al., 2001). Since salespeople have more control over their selling activities than over sales results, these behaviours should be the focus of performance evaluations (Walker et al., 1979; Churchill et al., 1990). Salespeople view these two dimensions as being very present in the application of a control system.

Although some salespeople realize that sales managers are not capable of accurately assessing their attitudes or initiative/aggressiveness and would therefore like these factors eliminated from the evaluation process (Pettijohn et al., 2001), relationships are the key to success in a sales career (Lassk et al., 2001). Because of their very nature, the use of intangible inputs is very difficult to measure and pinpoint for sales managers. However, it makes intuitive sense that the most important involvement would be focused on client relationships in sales careers (Lassk et al., 2001). Given environmental

uncertainty in the high-tech world, the presence of behaviour-oriented control systems must be strong (Krafft, 1999), and sales managers must understand this dimension. Therefore:

H9 a) Salespeople and sales managers perceive similarly the use of tangible inputs in a given control system where b) both perceive them as very important.

H10 a) Salespeople and sales managers perceive similarly the use of intangible inputs in a given control system where b) both perceive them as very important.

H11 From a sales manager's point of view, the use of intangible inputs is the most important component of a control system.

H12 From a salesperson's point of view, the use of intangible inputs is the most important component of a control system.

The last component of the model, and the only one pertaining to compensation in control systems, is the percentage of fixed salary in the salesperson's overall pay entitlement. Sales compensation is a valuable tool used to motivate and manage a sales force (Coughlan and Narasimhan, 1992). Since this dimension is factual as opposed to perceptual like the other five, no hypothesis need be developed for it..

4. METHODOLOGY

4.1 Research Context

Three high-tech sectors were investigated for this study, i.e. the computer industry, the electric and electronics industry and the environmental industry. They all meet Mohr's (2001, p.7) descriptions of the unique, uncertain environment in which high-tech marketers must compete. Three sectors were selected to enhance the external validity of the results and increase the opportunity to observe multiple

control systems (Oliver and Anderson, 1994). The choice of industrial sectors was prompted by three factors. First, these Canadian industries carried out the bulk of their activity within Quebec. Second, all three sectors posted rising exports. Lastly, Quebec, especially because of Montreal, is known for its high-technology pools, including the "Multimedia City" (computer industry). Furthermore, this study was confined to Quebec-based firms to allow for face-to-face interviews, which ensured us of questionnaire completion. As for the salesperson sample, the firms contacted were the same used in the first survey, thus providing easier access to potential respondents and a solid base for this analysis. Two questionnaires were used, one gathering sales manager perceptions throughout 1998 and 1999 and another gathering salespeople perceptions in 2001 and 2002 (see appendix).

4.2 Samples and data collection

4.2.1 Sales manager sample

For the computer industry, a list of 152 firms employing at least one sales manager was obtained from the *Fédération de l'Informatique du Québec*. The *Comité sectoriel de la main-d'oeuvre de l'industrie électrique et électronique* supplied a list for this industry, and that list was completed through the database of the *Centre de Recherche Industrielle du Québec (CRIQ)*. We contacted 272 firms on those lists. For the environmental industry, one list was obtained from the *Répertoires de l'Industrie Environnementale au Québec, editions 1997 and 1999-2000*, the directory of the members of *Réseau environnement* (environmental network), and another list from the *Répertoire of the CRIQ Centre de Recherche Industrielle du Québec (Vol. 4 and 5, 1999)*. We chose 262 firms from those particular lists. In all, 686 firms were contacted.

For the questionnaire investigating sales manager perceptions, 300 face-to-face interviews (100 from each sector) were conducted with the person in charge of the sales force in each targeted company. This was appropriate in that most firms use one single control system for their entire sales

force. In cases where a company had more than one sales force, respondents were asked to answer the questions with regard to one separate sales organization (Krafft, 1999). The overall response rate was 43.73%. However, since two questionnaires from the environment sector had too many missing values, they were removed from the analysis, and the final sample consisted of 298, for a response rate of 43.44%.

4.2.2 Salesperson sample

For the second part of this study, investigating salesperson perceptions, an initial telephone contact was made to sales managers of the targeted firms (selected in the first part of the study) to request permission to contact their salespeople. That preliminary contact eliminated 100 firms that had either moved or simply were not interested in participating. That gave a total of 182 firms as our sample for the second part of the study. Salespeople were then contacted by telephone; willing participants were sent the questionnaire by e-mail, one sector at a time. This allowed the researchers to phone back each non-respondent until a minimum number of responses were received. A total of 765 salespeople were telephoned and 715 questionnaires were e-mailed (CI: 249; EEI: 192; EI: 274). Out of them, 332 sales representatives (CI: 125; EEI: 102; EI: 105) from 182 firms (CI: 49; EEI: 54; EI: 79) responded, for an overall response rate of 46.43%, similar to the rate for the first questionnaire.

4.2.3 Characteristics of the samples

The sample size was approximately the same size for both studies, which is a help in comparing the two groups. Moreover, the vast majority of surveyed sales managers and salespeople have a university degree (sales managers 75,9%, salespeople 66%). Almost 60% of respondents (in both groups) have between 6 and 20 years of experience in the industry they work in, attesting to their understanding of the matter at hand.

4.3 Measures and validation

Virtually all measures were based on Oliver and Anderson (1994) and were phrased on a 7-point Likert-type scale, anchored at the ends with the terms "strongly disagree" (1) and "strongly agree" (7). The exceptions were salary, which was measured by the percentage of fixed salary only, and supervision, for which two items were mistakenly overlooked in the second study. To ensure direct identification of perceptual differences and similarities, the survey questions for managers were reformulated accordingly. Questions were pre-tested with 10 sales managers and 30 salespeople (10 from each sector). Because Quebec is bilingual, the questionnaires were in both French and English.

For the data to serve our analysis, measures must be reliable and valid. According to Bagozzi (1994), the following measurement properties are considered important: internal consistency of operationalization (reliability and unidimensionality), convergent validity and discriminant validity.

4.3.1 Construct reliability

To calculate the reliability of a construct, Cronbach alpha coefficients were first computed. To be reliable, a Cronbach alpha value must exceed 0.60 (Hair et al., 1998, p.118). For the sales manager sample, the values obtained are in the reliable range, albeit smaller than the ones given by Oliver and Anderson (1994), with the exception of the tangible input, of similar value. The only construct producing a value less than 0.60 is OUTPUT (0.48). Alpha coefficient values for the salespeople all exceed the recommended minimum and, by comparison with the first sample, are larger. For the first two traits (SUPER and EVAL), the values are about the same as for the sales manager sample. On the other hand, the three performance-related constructs (OUTPUT, INTANG, INTINT) show higher reliability coefficients for the salespeople and offer bigger differences in value than those for the sales manager sample. Values are much closer to those of Oliver and Anderson (1994). We also assess the

reliability of the measures using rho coefficient (Fornell and Larcker, 1981). It is not influenced by the number of items in the scale as opposed to alpha, but by the relative loadings of the items (Barclay et al., 1995). It is based on the ratio of construct variance to the sum of construct and error variance. A value greater than 0.50 indicates that the construct variance accounts for at least 50% of the measurement variance. As can be seen in Tables 1 and 2, all coefficient values exceed 0.50. Thus, the measures are reliable and provide usable data for both groups.

TABLES 1 AND 2 ABOUT HERE

4.3.2 Unidimensionality and convergent validity

Convergent validity assesses the degree to which two measures of the same concept are correlated. High correlations indicate that the scale is measuring the intended concept (Hair et al., 1998, p.118). For the sales manager sample, the chi-square (χ^2) value for the measurement model is 92.85, with 126 degrees of freedom (p=0.99), which indicates that the model is adequate for our study. However, because the χ^2 statistic is sensitive to sample size and model complexity (Sharma, 1996, p.174), other fit indices were used. The goodness-of-fit index (GFI: .97), the adjusted-goodness-of-fit index (AGFI: .94), the Bentler-Bonnett Index (Δ : .92) and the comparative fit index (CFI: 1.00) were also computed and yielded satisfactory results in assessing model fit. The values for root mean square residual (RMSR: .09) and standardized root mean square residual (SRMSR: .05) were also acceptable. Thus, the value of the fit indices indicate satisfactory model fit for the sales manager sample.

For the salesperson sample, the χ^2 value is 40.39, with 73 degrees of freedom (p=0.99) and also indicates an adequate model. The other fit statistics (GFI: .98, AGFI: .95, CFI: 1.00, Δ: .98) also indicate satisfactory model fit. The RMSR (.09) and SRMSR (.04) values are acceptable. The similar

values for both groups indicate similar model fit, i.e. both models are equally adequate for this study. Thus, both samples achieve unidimensionality and convergent validity.

4.3.3 Discriminant validity

Discriminant validity refers to the degree to which two conceptually similar concepts are distinct (Hair et al., 1998, p.118). We tested discriminant validity by means of two procedures. First, we checked whether correlations among the latent constructs were significantly less than 1 (Venkatraman 1989). Second, we compared a series of confirmatory factor models in which correlations between latent constructs were constrained to 1, and indeed chi-square differences were significant for all model comparisons ($p \leq .001$) in both samples (Jöreskog and Sörbom 1993). In sum, the data for both samples show evidence for unidimensionality, convergent validity, reliability and discriminant validity. We could then proceed to hypothesis evaluation.

5. RESULTS

5.1 Overall control system

The hypotheses derived in section 3 were tested using LISREL 8.51 for Windows. We performed analytical procedures to test the first three hypotheses pertaining to the overall control system. We used an approach similar to that of Windle and Dumenci (1999), who tested for factor (or measure) invariance between samples to compare data from different groups. Our goal for the first hypothesis was to compare the data gathered from both samples. Table 3 presents the results of two sequential models and a difference test for the two. Model 1 verifies the assumption that both groups have the same factorial structure, evaluating whether the six-dimensional structure and factor loading patterns represented both groups in a similar manner. No between-group parameter constraints were imposed in this model. In Model 2, the factor loadings of the salesperson sample were constrained to

be equal to those of the sales manager sample. The difference between models 1 and 2 tested the hypothesis that the factor loadings were equal across both groups. This provides information to test H1.

TABLE 3 ABOUT HERE

The chi-square statistic used in Model 1 shows that both groups have the same factorial structure (p: .99). However, since the chi-square statistic is affected by sample size and is sensitive to minor departures from multivariate normality (Sharma, 1996, p.157), three other fit indexes were employed: the Tucker-Lewis Index (TLI), the comparative fit index (CFI) and the root mean squared error of approximation (RMSEA). TLI was used to assess dimensions constrained across groups. A non-significant χ^2 and positive TLI difference would validate the hypothesis that factor loadings are equal for both samples. RMSEA measures model misfit per degree of freedom. As suggested by Windle and Dumenci (1999), research applications of RMSEA have indicated that values of 0.05 or less indicate a close fit relative to the degrees of freedom. The three indices yielded satisfactory results (CFI: 1.00, TLI: 1.00 and RMSEA: .00) as to both samples having the same factorial structure. These findings provide support for comparing the two groups. The RMSEA values for both models (M 1: .00 and M 2: .05) indicate close model fit relative to degrees of freedom.

To compare both models in terms of global fit, the chi-square statistic and TLI were used. The difference test indicates a χ^2_{diff} of 271.516 with a df_{diff} of 20 (P_{diff}: .00), which refutes the possibility of the same factor loadings for both groups. Moreover, TLI_{diff} presents a negative value (-0.11), indicating a global misfit when constraining factor loadings between both groups. These statistical results translate into the confirmation of H1, hypothesizing the presence of significant differences between the

models representing sales manager and salesperson perceptions regarding the use of one overall sales force control system in a given organization. Therefore, we can proceed to test the next hypothesis.

The second hypothesis states that salespeople and sales managers have different perceptions of the components defining a control system. To validate H2, we compared the extracted variance of each latent construct for both samples (Table 4). The extracted variance reflects the overall amount of variance in the items accounted for by the latent measure. Results indicate that the two samples do have different perceptions of each construct, for the values are different. Most values are nonetheless smaller than 0.50, the acceptable minimum recommended (Hair et al., 1998, p.612). Moreover, using Kendall's test to assess non-concordance between constructs, we obtained a value of 4.00 for the chi-square statistic with 4 degrees of freedom (p: .41). A p-value >.10 indicates that the two samples perceive the components differently. Kendall's test is similar to Spearman's coefficient of rank correlations which measures the degree of correspondence between rankings (Gibbons, 1985, p.226). In other words, while salespeople and sales managers rank the dimensions differently, they do not agree on the degree to which the components are present in the control system they are either undergoing or enforcing.

TABLE 4 ABOUT HERE

It is clear from comparison of the two groups that the salesperson sample has the higher factorial structure. This results in discordance in the perceptions of the two groups. Our findings indicate higher extracted variances (except for OUTPUT) for the constructs evaluated by the salesperson sample, translating into a better understanding of sales force control systems than for the sales managers. As for the OUTPUT trait, the very nature of the job may explain why this is captured more by sales managers than by salespeople. The SALARY construct has an extracted variance of 1.00 since the λ value was set at one. Therefore, this trait cannot be compared to the others on the basis of

the extracted variance value for both samples. Therefore, H2 is confirmed and we can verify the next hypothesis.

For the third hypothesis, stating that item contribution for each construct should be different for each group, Table 5 presents the item contribution for both samples using standardized and non-standardized values. It also outlines chi-square difference tests in which we compare the unconstrained model (all parameters free) with the constrained model (the parameter under study is fixed equal across groups). The p-value indicates significant or non-significant results. Close scrutiny reveals numerous discrepancies between the two groups. As regards the supervision construct (SUPER), for example, our results suggest that sales managers attribute the highest factor loading to item 5 ($\lambda_{51} = 0.87$), whereas salespeople attribute their highest factor loading to item 4 ($\lambda_{41} = 0.74$). However, the highlighted lines in Table 5 indicate a similar level of hierarchy between both samples for a specific item. Salespeople and sales managers prioritize 6 items out of 20 the same way: one in the supervision dimension, two in the evaluation dimension and three in the use of tangible outputs dimension. The items of the latter construct are ranked similarly by sales managers and salespeople, although the factor loadings differ. Nevertheless, we obtain a statistical difference in chi-square tests with p-values non-significant for 2 of the 6 items: (λ_{22} and λ_{33}). Thus, 4 items present significant similarities, and this implies that H3 is not fully validated.

TABLE 5 ABOUT HERE

5.2 Perception of control system components

Our results suggest that the dimensions of supervision, evaluation, use of objective outputs and the use of tangible inputs are not very well captured by our sales manager sample, whereas the use of intangible inputs is well represented. On the other hand, supervision, use of objective outputs and use

of tangible inputs are not well captured by the salesperson sample, whereas the dimensions of evaluation and use of intangible inputs are well represented for this group. Sales managers and salespeople do not share the same perception of any of the dimensions when observed individually. It is important to note that the hypotheses derived in section 3.2 do not relate to H2. Indeed, H2 refers to perception of the control system components as a whole; H4 to H12 refer to both parties' perception of individual system components.

Therefore, H4a, stating that the two parties perceive the supervision dimension differently, is validated since our samples do not have the same perception of this dimension (sales managers, R^2 = 0.31 versus salespeople, R^2 = 0.40). H4b is also validated in that salespeople perceive SUPER as more important. H5a, too, is validated. The two parties perceive the evaluation construct differently, and H5b is validated since EVAL received a better evaluation from salespeople. However, H6 is not validated since EVAL is not the variable captured the least by sales managers. The salesperson sample has the smallest value (R^2 = 0.28) for the use of objective outputs construct. This is perhaps because one item (λ_{23}) had a very low value and when removed, the OUTPUT variable yielded an acceptable result for its extracted variance measure. Nevertheless, the item was conserved in our analysis. Therefore, H7a,b, stating that salespeople and sales managers perceive differently the use of objective outputs, where sales managers perceive them as more important, are validated. Our results also indicate that this is indeed the least important control system component for salespeople, and H8 is validated. As for the use of tangible inputs component, this trait is not captured in the same way by the two samples and is not captured very well by either sample. This suggests that this dimension is not clearly understood by either party and thus H9a,b are not validated. Lastly, as regards the use of intangible inputs, H10a is not validated, but H10b is. Since sales managers and salespeople do perceive this component as the most important, H11 and H12 are validated. This component has the highest extracted variance values.

To summarize, our findings show that, as for the objective of building on the foundation laid by Oliver and Anderson (1994), the CFAs reveal that the instrument is better suited to the salesperson sample. For the objective of comparing salespeople and sales managers, our results corroborate most of the hypotheses. First, the perceptions of salespeople and sales managers regarding the three-level control system do effectively differ, as expected. There is no ambiguity as far as the first two levels are concerned. However, we found some agreement between both groups at the third level. No statistically significant difference was found for five items, two of which are almost significant with $p<.12$. An important finding here is that only the hypotheses expecting similar perceptions by both groups are not supported. This result itself confirms the relevance of this study.

6. MANAGERIAL IMPLICATIONS, LIMITATIONS AND FUTURE RESEARCH

By examining individual salesperson and sales manager perceptions of control procedures, this study serves as a reminder that conventional wisdom should be continually reassessed in the interest of improving sales management practice. This study provides some indications as to which control elements are better understood. First, based on the reliability indices (Cronbach alpha), we can say that the Oliver and Anderson (1994) instrument is more reliable for the salesperson sample. Based on the rho values, the instrument nonetheless has an acceptable level of reliability for both groups. One next step would clearly be to aim for a richer, broader conceptual framework for the control concept. This may open onto new dimensions not yet fully reflected in the descriptions of Oliver and Anderson (1994). In fact, their governance structure may not suit everyone's situation.

Second, since our understanding of discordant perceptions regarding control systems on the part of salespeople and sales managers was very limited, it was critically important to push further an investigation on how and to what extent those perceptions differed (Baldauf et al., 2001). Conflicting evidence regarding the control devices is particularly disturbing because controls are central to the

functioning of every organization. While the job position occupied may contribute to the different perceptions, there are other points that may explain our findings. One of the biggest challenges for sales managers is designing the perfect control system to be imposed on the sales force of their organization. Because principals must work many different dimensions into their design, the task at hand is no easy one (Krafft, 1999). Therefore, the matter of how sales managers and salespeople perceive a given control system is highly relevant. Isolating the perceptual differences of the two parties will help sales managers in the application of control systems within their companies. The main implication this study addresses is the use of salesperson input when designing a control system. The findings of Pettijohn et al. (2000) suggest as well that salespeople should play an important role and share in developing the evaluation criteria used by managers. The same authors add that if this first avenue is not taken, sales managers should explain the reasoning behind their use of specific criteria in the evaluation process. This raises the important matter of communication. We see communication as the key factor in clearing up tenacious perceptual differences regarding the application of control systems. Johlke and Duhan (2001) note that communication serves as the primary link between organization members. Moreover, their PEO theorized model – sales managers communication Practice → sales force communication Environment → salesperson communication and job Outcomes – implies that salesperson job outcomes depend on the quality of the sales managers' communication. To put it another way, employees who do not understand what is expected of them will be unable to deliver positive results. Careful attention should be given to this implication since, according to Sager (1999), senior management surveyed in three companies mention that turnover is a less costly alternative than more direct communication with salesforce. In none of these companies did senior management deliberately endeavor to communicate with field salespeople.

Despite the interesting results of this study, their interpretation is subject to limitations. Many of these results open up worthwhile research avenues, nevertheless. First, our samples consisted solely

of Quebec-based firms. Organizations established in other provinces or countries may not yield the same results. Because this province hosts a melting-pot society, our findings might be applicable only to Quebec. Another limitation is the use of Oliver and Anderson's (1994) instrument in characterizing sales force control systems. Although our findings support most of the hypotheses tested and we achieved our objectives, the overall level of findings is modest since the average variance extracted for most control system components as developed by Oliver and Anderson (1994) is quite weak. Other researchers have used different variables in describing control systems, and using their variables might yield different results (Krafft, 1999). Some of the constructs, especially OUTPUT, may require further research to help understand their own relevance in high-tech industries. Some control mechanisms are more likely to be emphasized by salespeople or sales managers when they need to improve their skills and abilities. Furthermore, one can ask if all control mechanisms are compatible with one another given the culture of the prevalent firm, its needs and its sales actors (Darmon 1998). Furthermore, since we did not use the perceptual compensation measures of Oliver and Anderson (1994) but opted instead for a factual measure, comparison of this important aspect was limited. A future study should address the complex array of compensation components (e.g. commissions, bonuses, contests) available since high-tech industries offer several kinds of incentives to employees and managers. Investigating these incentives is particularly worthwhile in the turbulent environment typical of these industries. Krafft (1999) suggests investigating compensation in the same way as management control to test for differences of perceptions and importance. Third, because sales jobs have changed markedly over the past decade, with salespeople more focused on relationships with clients and less on aspects within the organizational scope and the advent of information and communication technologies, the control devices developed by Oliver and Anderson (1994) may be less relevant. This study could be expanded by factoring these two developments in the sales profession into the evaluation of control systems (Lassk et al., 2001). Fourth, although our sampling plan produced a sample with the desired

degree of high technology, the sampling approach limits our ability to extrapolate for sales actors in low-tech organizations. It would be interesting to have a low-tech benchmark sector for comparison purposes. Fifth, there may be potentially important variables that were not included in the study. The most likely would be additional salesperson and sales manager characteristics and environment variables (Challagalla and Shervani, 1996; Darmon 1998). Practitioners in this field should also address the issue of job performance. The presence of perceptual incongruence between both parties would undoubtedly affect job performance for both groups. This cascades to another potentially fruitful area of investigation, i.e. job satisfaction. Brown and Peterson (1993) state that uncertainty about certain aspects of the job inhibits a salesperson's ability to perform and has a negative impact on job satisfaction.

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APPENDIX

Measures: Salespeople / Sales Managers

Compensation Plan
Please indicate (in %):
Your direct or basic salary (all remuneration that is guaranteed, independent of your performance)/Direct or basic salary of salespeople (all remuneration that is guaranteed, independent of their performance

From Oliver and Anderson (1994).
What is your opinion about the following items?
(ranging from "strongly disagree" to "strongly agree")
Evaluation
1. My sales manager weighs several factors in evaluating my performance/When we rate the performance of our salespeople, we take many things into consideration
2. Sales managers decide who is performing strictly by looking at each salesperson's bottom line/We decide who's good by strictly looking at each salesperson's bottom line
3. Only tangible results matter to my sales manager/Only tangible results matter to us
4. My sales manager does not care what I do as long as I produce/We don't care what our salespeople do as long as they produce
Supervision
1. My supervisor makes sure that everyone knows what to do and how to do it/We make sure everyone knows what to do and how to do it
2. My supervisor stays in close contact with me/We stay in close contact with our salespeople
3. I have little contact with the company's management/Our salespeople have little contact with our company's management
4. Management in my company stays well informed of my activities/Management in our company keeps very well informed of salespeople's activities
5. I feel isolated from management/Our salespeople feel isolated from management
6. I receive very little direction from my company's management / Our salespeople are subject to very little direction from our company's management
Performance
Outputs
Market penetration
Sales volume
Achievement of quotas
Tangible Inputs
Number of phone calls
Sales expense reports
Quality and completeness statement of phone calls report
Intangible Inputs
Attitude
Ability
Effort

Table 1

Confirmatory Factor Analysis (CFA) of the Control System (Sales Manager Sample)

ITEM CONTRIBUTION WEIGHTS						
Items	**SUPER** λ (t-value)	**EVAL** λ (t-value)	**OUTPUT** λ (t-value)	**INTANG** λ (t-value)	**INTINT** λ (t-value)	**SALARY** λ (t-value)
λ_{11}	0.17**(2.44)					
λ_{21}	0.17***(2.58)					
λ_{31}	0.78****(13.00)					
λ_{41}	0.30****(4.43)					
λ_{51}	0.87****(14.57)					
λ_{61}	0.61****(9.75)					
λ_{12}		0.26****(3.65)				
λ_{22}		0.61****(7.80)				
λ_{32}		0.64****(8.15)				
λ_{42}		0.80****(10.00)				
λ_{13}			0.99****(22.03)			
λ_{23}			0.13**(2.08)			
λ_{33}			0.42****(6.81)			
λ_{14}				0.70****(8.06)		
λ_{24}				0.48****(6.16)		
λ_{34}				0.56****(6.87)		
λ_{15}					0.79****(12.33)	
λ_{25}					0.67****(10.50)	
λ_{35}					0.73****(11.29)	
λ_{16}						0.99****(22.16)
Extracted Variance :	0.31	0.37	0.39	0.35	0.54	0.99
α	0.78	0.69	0.48	0.60	0.75	
α (O&A 1994)	0.86	0.76	0.62	0.59	0.84	____
ρ	0.67	0.68	0.57	0.61	0.78	

DISCRIMINANT VALIDITY ϕ (t-value)						
	SUPER	**EVAL**	**OUTPUT**	**INTANG**	**INTINT**	**SALARY**
SUPER	1.00					
EVAL	0.42****(5.74)	1.00				
OUTPUT	0.03 (0.49)	0.09 (1.23)	1.00			
INTANG	-0.19**(-2.27)	0.08 (0.89)	0.10 (1.31)	1.00		
INTINT	0.19**(2.51)	0.26****(3.40)	-0.06 (-0.82)	0.18**(2.16)	1.00	
SALARY	-0.12*(-1.81)	-0.11 (-1.48)	0.34****(6.15)	-0.08 (-1.01)	-0.19***(-2.97)	1.00

UNIDIMENSIONALITY AND CONVERGENT VALIDITY
$\chi^2 = 92.85_{(126)}$
P = 0.99
RMSR = 0.09
SRMSR= 0.05
Δ = 0.92
GFI = 0.97
AGFI = 0.94
CFI = 1.000

*p<0.1, **p<0.05, ***p<0.01, ****p<0.001

Table 2

Confirmatory Factor Analysis (CFA) of the Control System (Salesperson Sample)

ITEM CONTRIBUTION WEIGHTS						
Items	**SUPER** λ (t-value)	**EVAL** λ (t-value)	**OUTPUT** λ (t-value)	**INTANG** λ (t-value)	**INTINT** λ (t-value)	**SALARY** λ (t-value)
λ_{11}	0.56****(4.72)					
λ_{21}	0.71****(9.63)					
λ_{31}	0.60****(6.75)					
λ_{41}	0.74****(9.23)					
λ_{51}	0.68****(9.76)					
λ_{61}	0.48****(9.64)					
λ_{12}		0.95****(6.87)				
λ_{22}		0.79****(12.28)				
λ_{32}		0.83****(13.07)				
λ_{42}		0.23***(3.23)				
λ_{13}			0.68****(6.00)			
λ_{23}			0.34****(4.37)			
λ_{33}			0.52****(4.53)			
λ_{14}				0.48****(4.81)		
λ_{24}				0.89****(5.28)		
λ_{34}				0.46****(4.76)		
λ_{15}					0.79****(13.04)	
λ_{25}					0.98****(16.64)	
λ_{35}					0.99****(16.86)	
λ_{16}						1.00****(21.60)
Extracted Variance	0.40	0.57	0.28	0.41	0.86	1.00
α	0.80	0.67	0.60	0.76	0.91	
α (O&A 1994)	0.86	0.76	0.62	0.59	0.84	_____
ρ	0.80	0.82	0.53	0.66	0.94	

DISCRIMINANT VALIDITY ϕ (t-value))						
	SUPER	**EVAL**	**OUTPUT**	**INTANG**	**INTINT**	**SALARY**
SUPER	1.00					
EVAL	0.53***(8.05)	1.00				
OUTPUT	-0.25*(-2.34)	0.32**(3.14)	1.00			
INTANG	-0.09 (-1.04)	-0.28***(-3.97)	-0.31* (-2.20)	1.00		
INTINT	0.54***(8.36)	0.38***(6.80)	-0.34***(-3.76)	-0.08 (-1.11)	1.00	
SALARY	0.02 (0.27)	0.01 (0.19)	0.39***(4.54)	0.01 (0.15)	-0.03 (-0.50)	1.00

UNIDIMENSIONALITY AND CONVERGENT VALIDITY
$\chi^2 = 40.39_{(73)}$
P = 0.99
RMSR = 0.09
RMSR= 0.04
Δ = 0.98
GFI = 0.98
AGFI = 0.95
CFI = 1.000

*p<0.1, **p<0.05, ***p<0.01, ****p<0.001

Table 3

Measurement Model Comparison and Difference Test (H1)

Salesmanager vs. Salespeople	Parameter Constraints	χ^2	df	P	CFI	TLI	RMSEA	Difference Test			
								χ^2_{diff}	df_{diff}	p_{diff}	TLI_{diff}
Model 1	$\Sigma_{k=2}$	133.239	199	0.99	1.000	1.00	0.00				
Model 2	Σ_{λ}	404.755	219	0.00	0.94	0.89	0.05				
Model 2 vs. 1								271.516	20	0.000	-0.11

Notes:

CFI: Comparative Fit Index, TLI: Tucker-Lewis Index, RMSEA: Root Mean Squared Error of Approximation

Table 4

Comparison of Extracted Variance between Groups (H2)

GROUP	SUPER	EVAL	OUTPUT	INTANG	INTINT	SALARY
Sales Managers	0.31	0.37	0.39	0.35	0.54	0.99
Rank	5	3	2	4	1	--
Salespeople	0.40	0.57	0.28	0.41	0.86	1.00
Rank	4	2	5	3	1	--

Kendall: $\chi^2_{(4),}$ p: 41

Table 5
Item Contribution to Respective Constructs of Both Samples (H3)

Construct (Trait)	Items	R.O.	Sales Manager Sample		Value Significance for Sample 1	Items	R.O.	Salesperson sample		Value Significance for Sample 2	Overall chi-square values (Sample 1 + Sample 2)				
			Stand. (λ)	Non-stand. (λ)				Stand. (λ)	Non-stand. (λ)		$\chi^2_{(199)}$	$\chi^2_{(200)}$	χ^2_{diff}	df_{diff}	P
Super	λ_{11}	5	0.17	0.18	**	λ_{11}	5	0.56	0.82	****	133.239	144.238	10.999	1	0.0009****
	λ_{21}	6	0.17	0.17	***	λ_{21}	2	0.71	1.07	****	133.239	183.556	50.317	1	0.0000****
	λ_{31}	2	0.78	1.47	****	λ_{31}	4	0.60	1.02	****	133.239	138.725	5.486	1	0.0192**
	λ_{41}	4	0.30	0.42	****	λ_{41}	1	0.74	1.00	****	133.239	149.824	16.585	1	0.0001****
	λ_{51}	1	0.87	1.51	****	λ_{51}	3	0.68	1.03	****	133.239	143.481	10.242	1	0.0014***
	λ_{61}	3	0.61	1.07	****	λ_{61}	6	0.48	0.82	****	133.239	135.633	2.394	1	0.1218
Eval	λ_{12}	4	0.26	0.36	****	λ_{12}	1	0.95	1.31	****	133.239	156.690	23.451	1	0.0000****
	λ_{22}	3	0.61	1.09	****	λ_{22}	3	0.79	1.31	****	133.239	134.648	1.409	1	0.2352
	λ_{32}	2	0.64	1.12	****	λ_{32}	2	0.83	1.48	****	133.239	137.231	3.992	1	0.0457**
	λ_{42}	1	0.80	1.41	****	λ_{42}	4	0.23	0.41	***	133.239	156.880	23.641	1	0.0000****
Output	λ_{13}	1	0.99	1.11	****	λ_{13}	1	0.68	0.81	****	133.239	146.541	13.302	1	0.0003****
	λ_{23}	3	0.13	0.18	**	λ_{23}	3	0.34	0.56	****	133.239	148.230	14.991	1	0.0001****
	λ_{33}	2	0.42	0.70	****	λ_{33}	2	0.52	0.91	****	133.239	134.090	0.851	1	0.3563
Intang	λ_{14}	1	0.70	1.27	****	λ_{14}	2	0.48	0.87	****	133.239	135.647	2.408	1	0.1207
	λ_{24}	3	0.48	0.81	****	λ_{24}	1	0.89	1.51	****	133.239	139.542	6.303	1	0.0121**
	λ_{34}	2	0.56	1.06	****	λ_{34}	3	0.46	0.83	****	133.239	134.093	0.854	1	0.3554
Intint	λ_{15}	1	0.79	0.78	****	λ_{15}	3	0.79	1.01	****	133.239	138.922	5.683	1	0.0171**
	λ_{25}	3	0.67	0.65	****	λ_{25}	2	0.98	1.20	****	133.239	166.142	32.903	1	0.0000****
	λ_{35}	2	0.73	0.65	****	λ_{35}	1	0.99	1.28	****	133.239	178.085	44.846	1	0.0000****
Salary	λ_{16}	--	0.99	1.54	****	λ_{16}	--	1.00	1.80	****	133.239	139.115	5.876	1	0.0154**

R.O.: Item's ranking order to respective trait
Same ranking order between both samples

*p<0.5, **p<0.05, ***p<0.01, ****p<0.001