A Correlational Approach to the Study of Professional Culture and Intraorganizational Conflict

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Abstract

This study is based on data from Sales and Accounting functions in three different organizations. We know that the contextual inputs to behavior in sales and accounting include professional, organizational and national culture. By holding national culture and organizational culture constant, this paper focuses on the influence of professional culture in conflict interactions. The data from this study suggest that both accounting and sales have strong and distinct professional cultures. The greatest cultural value differences occur with the dimensions of individualism and uncertainty avoidance. There is a significant positive correlation between dimensional variance and conflict frequency. The findings suggest that cultural dimensions with incongruent values between the two professions are positively correlated with interdepartmental conflict. Through better understanding of professional culture we may be more effective at managing conflict in the workplace.

Introduction

This study compares differences in professional culture values for sales and accounting with frequency of conflict between these two groups.

Conflict is operationalized using specific defensive tactics that are categorized within each of five professional cultural constructs. Defensive communication tactics are defined as interactions that can be aggressive, attacking and angry, or passive and withdrawing (Nelson & Quick, 2006; Thomas, 1976). Eight of the major conflict tactics include: power play, put-down, labeling, raising doubts, misleading information, scapegoating, hostile jokes, and deception (Nelson & Quick, 2006; Robbins, 2003).

Professional[1] culture is described by Hochschild (2003, p. xii) as existing in a "shroud of salient ambiguity". Pierre Bourdieu points out that people are not born into professions but acquire the "socially learned predispositions" of their professions (2004). Boyatzis tries to better define professional culture by suggesting that it is simply the behaviors that are appropriate and acceptable by each profession (1982, p. 20). Professional culture often appears under the heading of a "subculture", not being acknowledged as important as national and organizational cultures (Scott et al, 2003; Hofstede, 1980; Degeling et al, 1998). The concept of managing the tribe as presented by Dave Logan et al (2007) may be linked conceptually to what we mean by a

[1] Profession is synonymous with occupation in the context of this paper.

professional culture. They suggest that the tribe's guidance system for performance is programmed with a set of cultural standards: "Tribal Leaders focus their energy on building the tribe or, more precisely, upgrading the tribal culture." (p. 34)

There is a paucity of research that defines professional culture and analyzes its role. Much of the limited research in this area has been done by firms that have little incentive to publish their work. Consulting firms often conduct professional culture studies for corporate clients who want to use the research for their own internal purposes (Watson Wyatt, personal communication, 2007). Some professional groups, such as engineers (CCPPSE, 2007) and the US Navy (Krauss, 1996), attempt to verbalize their cultural values. There are few if any robust measurement scales for professional culture. Ned Hermann's brain dominance instrument uses four dimensions to differentiate professional cultures using the construct of thinking style (Hermen, 1996). Ned Hermann and Ann Hermann-Nehdi used thinking styles as a differentiator between engineers and earth scientists in a study they completed with Shell Oil Company (1996)

But professional culture is really not a new construct. Even 30 years ago, Robert Edgerton (1971) studied the differences between pastoralists and farmers in four different African tribes. He noted these two groups differed prominently in their expressed attitudes toward authority. In all four tribes, the pastoralists expressed respect for authority more often than the farmers. This paper will define professional culture based on Hofstede's (1984) definition of culture as "the collective programming of the mind". The specific professional culture dimensions in this study were derived by Herkenhoff (2008) from the cultural research of Hofstede (1980) and Bond (1988) (Appendix 1).

Hofstede (1980) and others (Deal & Kennedy, 1982; Laurent, 1986; Bond, 1988; Trompenaars, 1994; Newman & Nollen, 1996; Phatak et al, 2005) have primarily focused on national and organizational cultures. Just as Hofstede notes that national culture is not genetically shared but is passed down between groups, the same holds true for professional culture. Consider the professor's relationship with a graduate student or a judge with a law clerk. In these examples the senior participant shares the "rules of the road" in professional behavioral and protocols with the less experienced colleague.

Specifically this study will test the following hypothesis:

H_1: The frequency of conflict between professional cultures increases as the differences in their professional cultural values increases.

This study makes a unique theoretical contribution to the literature by linking the areas of professional culture and conflict. Specifically it provides a quantitative tool to explore the relationship between intraorganizational conflict and professional culture.

Method

To test the hypothesis cultural values and conflict data were collected within the accounting and sales functions from three organizations, resulting in an aggregated response rate of 67%. These organizations were chosen based on shared values, access and availability. In order to hold national culture constant these organizations are all headquartered in the United States. To minimize the effect of differences in organizational values, the organizations had similar industry/demographic profiles and espoused values. These are summarized in Appendix

2. The entire populations of accountants and sales employees within the headquarters of each organization were surveyed. The respondent sizes and response rates are included in Table 1.

Table 1. Respondent data

Organization	**Number of Respondents**		**Response Rate**
	Accounting	**Sales**	
1	30	28	70%
2	80	92	74%
3	73	86	59%
Sub Total	183	206	
Overall	**N= 389** **Response rate = 67%**		

Professional cultural values were collected using the PC08 survey tool (Herkenhoff, 2008). The survey questions are provided in Appendix 3. The PC08 questionnaire was developed based on a dimensional approach in which dimensions capture trends as a meaningful representation of the statistical data. The survey consists of 3 questions for each of the 5 professional culture dimensions. A 5-point Likert scale was used to collect quantitative results for each question. The three scores within each cultural dimension were summed. These cultural aggregate scores were calculated for each cultural dimension for the sales data and for the accounting data resulting in a group score for the accounting job family in each of the 5 dimensions and likewise a group score for the sales job family in each of the five dimensions. Absolute score differences (deltas) were calculated for each dimension by subtracting the sales value from the accounting value.

Participants understood that the PC08 results would remain anonymous. It should be noted that the professional dimensions in PC08 are defined in a global manner and as such are meant to apply within any national culture and any organization. There are no organizational or national culture biases in the questions. The strength of this instrument is that it is closely based on the Hofstede/Bond model. The survey is quick and easy to complete, which allows for higher response rates. The instrument is theoretically based and is not under copyright. PC08 is a reliable and valid survey instrument to measure professional culture.

Conflict data was collected by having participants report the percent frequency occurrence of conflict tactics within given contexts over the past 6 months during interactions between members of sales and accounting. The interactions could be experienced (experiential data) by the respondent or directly observed (observational data) by the respondent. Three contexts were provided within each of the five cultural constructs. The conflict scores were not separated by job family as the source of the reporting was not a variable in this model, just the actual conflict score independent of whether the respondent was in one job family or the other. This data was sorted by cultural dimensions and overall conflict-culture scores were calculated for each of the 5 dimensions. The conflict-culture constructs are defined in Appendix 4. The mapping of the PC08 constructs with the conflict constructs and the cultural differences (deltas) is provided in Appendix 5.

The variables were analyzed using a Pearson correlation matrix in SPSS 17.0.[55] Spearman's Rank Order Correlation (SPRC) statistic was then applied to the paired data to determine whether the associations between rankings on the two variables of interest, professional culture differences (Dx) and conflict (Cx), was statistically significant (Coakes & Steed, 1997; Cramer, 1998). The SPRC is essentially a Pearson's correlation on data that has been ranked. In this analysis it should be noted that the data consist of a random sample of n pairs of numeric observations at the group level.

Results

The age data ranged from 26 to 51 years old with an average age of 37.8 years old and a standard deviation of 4.6 years. The aggregated gender differentiation was 63% male. All PC08 subscales except Gender achieved an acceptable level of reliability as summarized in Table 2. Therefore Gender will not be included in this correlational study of sales and accounting data.

Table 2. PC08 Scale Reliability

Professional Culture Subscale	**Cronbach Alpha**
Power (P)	.70
Time (T)	.69
Risk (R)	.56
Service (S)	.66
Gender (G)	.15
Individualism (I)	.81

To test for non-overlapping content between the PC08 dimensions, a regression analysis was completed for each dimension, while entering the remaining four dimensions as the predictor variables. The resulting adjusted R sq value represents the systematic variance in each factor accounted for by its relationship to the other four factors. Subtracting each factor's R sq value from its alpha value yields the systematic variance of the factor that is independent of its relationship with the other four dimensions. These results indicate that most of the variance in each dimension is distinct from the other four (Table 3).

Table 3. Independent Systematic Variance of Dimensions

Professional Culture Dimension	**Systematic Variance**
Power (P)	.53
Time (T)	.62
Risk (R)	.59

Service (S)	.51
Individualism(I)	.69

The resulting Pearson bivariate correlation coefficients for all relationships and the associated descriptive statistics are presented in Table 4. None of the within group results in the correlation matrix exceed 0.8, hence there was no indication of the existence of multicollinearity in the model (Bryman & Cramer, 1994). However two significant positive relationships are indicated between Power (P) and Conflict- Power (CP), and between Risk (R) and Conflict- Risk (CR). Although this study explores the correlational relationship between conflict and *differences* (deltas) in culture, perhaps an additional requirement is that the culture value as a stand alone variable also holds a relationship with conflict. This analysis is beyond the scope of this paper but is worth noting for future research.

Table 4 Pearson Bivariate Analysis and Descriptive Statistics

	Mean	**s.d**	**Professional culture**					**Conflict (%) within each cultural dimension**				
Variables			P	T	R	S	I	CP	CT	CR	CS	CI
1.Power (P)	7.90	1.43	1									
2. Time(T)	12.21	1.72	0.349**	1								
3. Risk (R)	6.51	1.84	-0.481	-0.101**	1							
4. Service(S)	11.6	2.35	0.481**	-0.217**	0.029*	1						
5 Individualism (I)	6.35	1.01	-0.315**	-0.188**	0.033	0.432**	1					
6.Power Conflict (CP)	4.18	1.25	.521**	0.207**	-0.304**	-0.136*	-0.103	1				
7.Time Conflict (CT)	3.90	1.57	0.209**	0.067**	-0.201**	-0.153*	-0.175**	0.222**	1			
8.Risk Conflict (CR)	4.55	1.15	-0.258**	-0.068**	0.447**	-0.143*	-0.191**	0.253***	-0.081	1		
9.Service Conflict (CS)	3.97	1.73	-.084**	-0.011	-0.183*	0.01**	0.318**	-0.097	0.011*	-0.239**	1	
10. Individualism (CI)	4.98	.899	-0.15*	.166*	.201*	.332**	0.50**	.097	.129*	-.120***	.008	1

N= 389

* p< .05, **p< .01, *** p< .001

Professional Culture

The relative rankings of the two cultures across all five dimensions are provided in Table 5. Each respondent completed the PC08 survey. These results were aggregated for each of the 5 cultural dimensions for accounting and for sales. The maximum score for each dimension is fifteen (3 questions on a 5 point Likert scale). The higher the power index the greater the role of

hierarchies in the culture. The higher the time index the greater the long term focus in the culture. The higher the risk index, the more accepting the culture is in taking risks. The higher the service index the greater the focus on the role of service in the culture. The higher the individualism index the higher the level of individualism in the culture.

The absolute value differences between sales and accounting scores were translated into percentage deltas for more effective understanding of the correlational results with the conflict data.

Table 5. PC08 Professional Culture Rankings

	Power	**Time**	**Risk**	**Service**	**Individualism**
Sales	11	10	12	13	2
Accounting	9	7	2	12	8
$\lvert$*Sales – Accting*$\rvert$ (Dx %) = (Δ/15)*100	13 % (DP)	20% (DT)	66% (DR)	7% (DS)	80% (DI)

The reported frequency of conflicts by category is summarized in Table 6. The conflict constructs are not mutually exclusive and the aggregated nature of the weighted mean data allows for the summated value across all variables to exceed 100%.

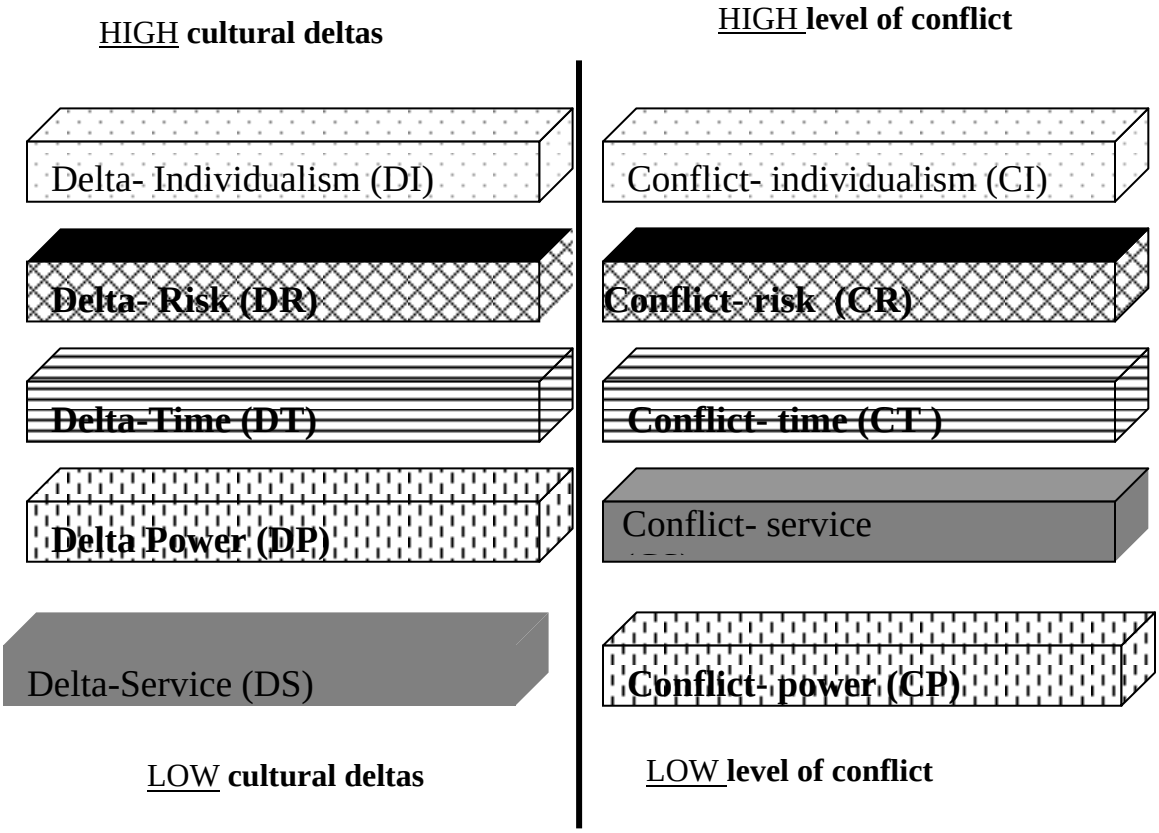
Table 6. Reported Conflict Occurrence within each Cultural Dimension

	Conflict sourced from Power (CP)	**Conflict sourced from Time (CT)**	**Conflict sourced from Risk (CR)**	**Conflict sourced from Service (CS)**	**Conflict sourced from Individualism (CI)**
Sales	7%	15%	60%	1O%	80%
Accting	5%	15%	75%	5%	78%
Weighted Mean n_A **= 206** n_S **= 183**	6.0%	15.0%	67.0%	7.6%	79.1%

The Pearson correlation coefficient could not be used with the averaged data due to the issue of ecological inflation of the coefficient. Instead the Spearman Rank Order Correlation (SPRC)

statistic was used to measure the association between the cultural deltas (Table 5) and the weighted mean % frequency conflict data (Table 6).These results are shown schematically in Figure 1.

Figure 1. Rank Order of Differences in Professional Culture Dimensions with Conflict Occurrence



Spearman Correlation	-0.900, $p < 0.05$

All relationships matched except for conflict-service (CS) which was ranked one step higher than its counterpart delta-service (DS). The resulting non-parametric correlation achieved significance (rho= -.900, $p < .05$).

Discussion

The first professional culture dimension is referred to by Spencer (1993) during his discussion of an individual's ability to understand and use power relationships. Jobs that are part of a structure usually have less autonomy and are part of a hierarchy. This dimension maps directly from Hofstede's VSM instrument that measures the degree of acceptance a culture has for hierarchies (Hofstede, 1993). A high value on the Power dimension indicates a culture that

readily accepts power differentials. This is often demonstrated via hierarchical structures and processes, such as what we see in both the sales and accounting departments of organizations. In this dimension both sales and accounting share a similar set of values. Both of these groups have visible power differentials built into their cultures such as hierarchical job titles and reporting relationships. The two job families differ by only 13% in this cultural dimension. Likewise a minimal amount of conflict associated with the power construct is reported at only 6%.

Long-term orientation professions do not typically focus on immediate results and payoffs. Bond's (1988) long-term orientation dimension describes a culture whose values are primarily focused on the past and future. Short-term orientation cultures focus on the here and now. Bond's work was based on national culture data but the PC08 instrument has incorporated this construct in the Time dimension for measuring professional culture. A higher value on this dimension equates with a higher degree of long-term orientation. Both sales and accounting professions have a balanced position in this dimension. Both groups face daily problems that have to be fixed immediately as well as problems that may be longer term. Julia Chang (2003) suggests that managers of sales people often want them to think about longer-term goals, not one off deals. Accountants show a concern for timely responses with a fear of procrastination. They are comfortable with well-defined processes and regulations. Sales and accounting do not indicate any major differences in this cultural dimension (20%) and do not report any significant levels of conflict (15%).

Hofstede captures this construct within his uncertainty avoidance index (UAI). His UAI measures the degree to which a culture accepts uncertainty. A high score on the PC08 Risk dimension suggests a culture that values and expects its members to take risks. Spencer (1993) refers to "concern for order" which reflects the underlying drive to reduce uncertainty; this may be demonstrated in PC08 with a lower risk dimension. Based on his work a professional culture might reduce uncertainty by having clear roles, functions, processes and rules. Jobs with higher day-to-day predictability such as accounting minimize uncertainty. Other professional cultures such as sales reward taking chances. Occupations in which creative thinking or "out of the box" ideas are desired, usually support risk taking. In this study the sales employees indicate a higher level of risk taking than their accounting counterparts. Accountants are expected to dutifully follow all rules and avoid risk. Sales personnel are often rewarded for taking risks and "thinking out of the box". This cultural dimension achieves a significant difference (66%) and has the high reported incidence of conflict at 67%.

Hosftede's Masculinity dimension has two subscales in the in the PC08 and refers to the amount of service and the degree of machismo associated with the profession. Service tends to be associated with more matriarchal culture. However a low gender differentiated, or gender-neutral professional culture, can still be highly service based. Service refers to the degree of customer service associated with the profession. There also appears to be an association between male dominated professions and machismo. For example jet fighter pilots are typically male dominated and demonstrate a high degree of machismo, whereas the gender-neutral teaching profession does not. The machismo subscale failed to achieve an acceptable level of reliability therefore for purposes of this study only the service construct will be quantified. The two job families did not display any significant differences in this cultural dimension at 7%; both groups strive to provide high quality service to their customers. The conflict associated with service is only 7.6%.

Individualism measures the degree to which the individual needs and desires are primary to those of the collective (Hofstede, 1980). Accountants are considered as individual

contributors whereas sales professionals often value the needs of the collective ahead of their own personal needs. The individualism dimension suggests that the sales group is a more collectivist culture while accountants are more individualistic. The sales have a lower degree of individualism than accountants. Sales people often have team-based bonuses but accountants are often evaluated solely on individual performance. Accountants may work in teams but typically think of their individual needs ahead of the collective. Most occupational cultures have both individualistic and collectivist values but one set of these values is usually more dominant than the other. A professional culture that scores high on this dimension is more individualistic in nature. The differences between the 2 professional groups in this cultural dimension are the greatest at 80%. The associated conflict is also the highest score at 79.1%.

The Spearman Rank Order analysis achieved significance with only service mismatching by one rank order. This may be due to the fact that sales is more externally focused on service while accounting is more internally focused. The general concept of service is shared but the operational definition maybe different in both groups. The overall rank order association supports the hypothesis.

Conclusions

The results from this study inform the theoretical and practical understanding of the ecological level relationship between professional culture and conflict in the workplace for sales professionals and accountant. The results indicate that as the differences in professional cultural values increase, the frequency of conflict sourced from those cultural dimensions increases. In general, the greater the level of incongruency between cultural values the greater the level of conflict.

From a statistical standpoint, the association between frequency of conflict and differences in cultural values achieved significance, thereby supporting the hypothesis.

Limitations and Future Research

There is a need to better understand the unspoken assumptions that guide attitudes and behaviors and form the stable substrata of professional culture. There needs to be more research in this area to engage conversation between methods and findings of qualitative and quantitative approaches. In several countries, the term “professional culture”, refers to tradesmen and laborers. In future research outside of the United States this term will be replaced with “occupational culture” to avoid further confusion about excluding any occupational group.

The organizational culture could be measured using a survey tool that measures the enacted values not just the espoused values.

The Hofstede MAS dimension needs to be better translated in the PC08 Gender dimension to improve reliability of this construct. This dimension needs to quantitatively measure the degree of machismo in a professional culture, in addition to collecting it through observational gender role differentiation data. Modifying MAS to include a measurement of the relationship with the workplace environment may also be worthwhile. This modified dimension will require statistical validation before being accepted as part of the PC08 survey instrument.

The sample can be improved by collecting data outside of the United States and by including a larger range of professional cultures. Group level statistical analysis such as the one in this study is data intensive and requires additional professional group level data to improve the robustness of the model. The influence of professional culture on various workplace behaviors

beyond conflict should be explored to better define the complete influence of professional culture in the workplace.

Conflict data could be more accurately reported by requesting participants to keep a daily log of conflict rather than depending on historical self report data. However to motivate employees to do this would require managerial support from within the organization. A more thorough analysis of the variance in conflict may be obtained by building a structural equation model in LISREL at the individual level that includes several other factors such as age, gender, number of years experience, highest level degree, etc. Additionally analyzing all three levels of culture with conflict in an HLM (hierarchical linear model) would greatly expand our knowledge of conflict in the workplace.

Managerial Implications

"The more employees are aware of differences in each other's professional culture, its communication style, customs, values and traditions, the more they can build a productive partnership, teach and learn from one another and develop new knowledge and skills." (Tanner et al, 2003).

One potential implication for managers is to consider professional culture as an important component of organizational success. Professional culture is important and may help organizations achieve goals by forming cohesive groups of employees that help to advance both their interests and those of the company if managed properly. It is important to be aware of how your actions as a leader, though acceptable in one professional culture, may be ineffective when dealing with another.

Tanner et al (2003) suggests that when conflicting cultures work together stress levels increase due to differences in communications and expectations. Perhaps through the analyses outlined in this paper stress can be better managed leading to a healthier workplace.

Better understanding differences in professional cultures may help managers predict areas where cross-cultural coaching and training can improve communications and processes between professions. It is not sufficient to simply believe that common organizational culture values will provide an adequate foundation for effective inter-departmental work relationships.

Reynolds and Kalish (2002), organizational consultants in conflict resolution, note that managers spend at least 25 percent of their time resolving workplace conflicts. This affects the productivity of both managers and associates employees and can have a far-reaching impact on organizational performance. Understanding where professional cultures may not share similar values and beliefs may assist managers in indentifying potential sources of conflict. Educating employees about differing value systems may help them work more effectively with one another.

Management practices that reinforce professional culture are more likely to yield predictable employee behavior and high performance (Helmreich & Merritt, 1998). National culture values are frequently acknowledged within organizations by way of diversity programs and various national culture employee clubs. Many resources are dedicated to the development and communication of organizational values. But even within strong organizational cultures, professional culture may still be a significant influence. This study suggests that managers need to make themselves aware of the various professional cultures they manage and interact with, both inside and outside of their organizations. By understanding where the cultures may have incongruent cultural values may provide opportunities to develop more effective relationships.

Appendix 1. Professional Culture Dimensions

Hofstede/Bond	**Professional culture dimensions**	**Professional culture definition with examples**
Power distance	Power (CP)	The degree to which power differences are accepted within the profession. Example: Monks accept the hierarchy of the catholic church whereas professors do not prefer working in organizations that are inherently hierarchical.
Long term orientation	Time (CT)	The degree to which the occupational group is long term focused. This may include reward systems and personal relationships. Example: A minister may be more long term focused in his relationships with people than a shoe salesman. Rewards for the day trader are more immediate versus a longer term pay off for the researcher.
Uncertainty avoidance	Risk (CR)	The degree of risk taking associated with the profession. Example: Deep-sea divers are highly risk averse. They work hard to avoid risk. Whereas professional gamblers accept a higher degree of risk in their transactions.
Masculinity	Gender (CG) Service (CS)	The degree of gender based role differentiation in the profession. We know highly male dominated professions often show higher levels of machismo. Example: Jet fighters are predominantly male while professional orchestra musicians have negligible to no role differentiation. The degree to which helping others is part of the job. Service focus tends to be associated with cultures that are not male dominated (Low MAS) Example: Nurses have a high level of service but data entry workers do not.
Individualism	Team (CT)	The degree to which personal needs and desires are primary to those of the collective. Example: Professors have a high level of individualism while firefighters are more collective in nature.

Appendix 2: Organizational Profile

	Organization 1	**Organization 2**	**Organization 3**
Headquarters	USA	USA	USA
Global Operations	Yes	Yes	Yes
Industry	Energy	Energy	Energy
Sales and Accounting Populations in headquarters	Started with 201 but final count 83 (workforce reduction affected these groups before this study was completed)	232	269
% Males in Accting and Sales	62	72	69
Mean age in Accting and Sales	35	39	38
Top three espoused organizational values	People are our most important asset. We value diversity. We value the environment and support green efforts.		

Appendix 3: Professional Culture Survey (PC08)

Cultural Index	Scoring	Question Number	Related Survey Question
1.Power		1	My job is part of a hierarchy (chain of command)
	reverse	2	My job is very autonomous
		3	Titles are important in my profession
2. Time		4	My job requires long term professional relationships
	reverse	5	My job requires immediate results.
		6	Results in my job have a longer time investment
3. Risk		7	In my job I get rewarded for taking risks
	reverse	8	My job has a high degree of predictability
		9	I have a high degree of personal risk associated with my job
4. Service		10	My job has a strong service focus
		11	I need to adapt to the needs of others in my job on a regular basis
		12	My job requires significant amount of cooperation with others
5. Individualism	reverse	13	My job is more about individual contributions than team contributions
		14	My job has a strong team focus
		15	I often need to inhibit my personal needs in place of team needs

Appendix 4: Conflict-Culture Constructs

Defensive Communication Tactics: power play, put-down, labeling, raising doubts, misleading information, scapegoating, hostile jokes, and deception

Question: During the past 6 months how often did you **observe** or **experience** any of the above tactics in the following contexts during interactions between members of sales and marketing. When you consider all of the conflict related situations in the work place what percentage occurred in each of the 5 cultural dimensions listed below?

Cultural Dimensions:

1: Power: Reporting relationships, Upward communications, Power plays _____%

2. Time: Long term focus issues, Time taken to make decisions, Time deadlines____%

3: Risk: Taking risks, Managing risk, Value/risk tradeoffs _____%

4: Service: Service delivery, Internal vs. External customers, Managing customer expectations _%

5: Individualism: Shared resources, Personal accountability, Teamwork____%

Appendix 5: Construct Mapping

Mapping of the conflict dimensions (C) with the cultural dimension differences (D); *not provided to the respondent, only for analysis purposes.*

Professional culture dimension	**Conflict context**	**Cultural dimension delta**
Power (P)	CP	DP
Time (T)	CT	DT
Risk (R)	CR	DR
Service (S)	CS	DS
Collectivism (C)	CC	DC

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