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Amy E. Hurley-Hanson, Ph.D.
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Insights into Negative Humor in Organizations: Development of the Negative Humor Questionnaire

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Negative humor has long been used in organizations, resulting in both positive and negative outcomes. This study describes the development of the multi-item Negative Humor Questionnaire, a measure based on confirmatory factor analysis. This 13-item scale was developed to assess individual level negative humor use. Domination and denigration are two dimensions of negative humor. The findings reveal that individuals may use negative humor intentionally in an attempt to gain superiority over other individuals and denigrate them.

Humor is important in organizational behavior and needs further research (Avolio, Howell & Sosik, 1999; Duncan, Smelzer, & Leap, 1990; Romero & Arendt, 2011). It has been studied for its constructive effects on promoting organizational change (Fox & Amichai-Hamburger, 2001), improving leadership (Decker & Rotondo, 2001), facilitating conflict management (Morris et al., 1998), enhancing group effectiveness (Romero & Pescosolido, 2008), and maintaining workplace culture (Holmes & Marra, 2002). Previous research has focused on utilizing positive humor to achieve favorable outcomes (e.g., Arendt, 2009; Fraley & Aron, 2004, Romero, 2005). For example, Romero and Cruthirds (2006, p. 59) proposed a model of workplace humor defined as “amusing communications that produce positive emotions and cognitions in the individual, group, or organization.”

However, there is also a potentially negative side to humor. Common examples are hazing (Taylor, 2001), ethnic jokes (Juni & Katz, 2001; Davies, 1982), disability-oriented jokes (Albrecht, 1999), and horseplay or practical jokes (Dreyfack, 1994). What is common with all of these types of negative humor is that they may distract personnel from work, cause emotional stress, and sometimes result in physical conflict. Thus, negative humor in an organizational environment can be understood through various humor messages initiated by some employees that cause emotional harm to other employees in the organization. The implications of these types of behaviors can be severe. When negative humor is interpreted as harassment, it can lead to lawsuits, legal action by government enforcement agencies, reduction in productivity, and induce employee turnover (Duncan et al., 1990; Mueller, DeCoster, & Estes, 2002). For example, the United States Merit Services Protection Board (1994) identified sexual teasing and joking as one of six types of behavior that can be construed as sexual harassment. In that report, the agency estimated that sexual harassment cost the government around \$327.1 million per year in job turnover, sick leave, and reduced individual and workgroup productivity.

However, negative humor does have utility (Gruner, 1997; Boxer & Cortes-Conde, 1997). Examples include teasing, mild ridicule, practical jokes, funny nicknames, embarrassing stories, etc. Negative humor can contribute to team building and bonding as long as common sense is used (Terrion & Ashforth, 2002). Managers regularly motivate workers with a variety of traditional approaches (i.e., rewards, praise, etc.), but those might not be as effective for certain situations. A prime example is basic military training (boot camp) in the United States, where drill sergeants use negative humor on new recruits. Drill sergeants use such humor to demonstrate their dominance over recruits and secure compliance to extraordinarily difficult training requirements, where common forms of motivation would be ineffective. Boot camp requires recruits to undergo a massive transformation from civilian to soldier in a short period of time. Teasing and ridicule are highly effective in this and similar situations, where immediate compliance to orders from superiors is essential to success. It is a form of negative reinforcement that motivates followers to comply and creates a sense of belonging for those who do.

This dynamic also works, at varying levels of intensity, with police and firefighters, stock and commodity traders, and other groups that have strong bonds and/or are involved in intense situations. Since negative humor can vary in intensity, it can be both funny and deliver a clear message at the same time. Therefore, negative humor can lead to positive effects. This can be seen in fraternities, sports teams, groups of male friends, etc. Overall, negative humor is effective in tough environments and when rigorous standards are expected (i.e., coaching). It also works well in cohesive groups composed of mature adults who communicate honestly and use negative humor for fun, member initiation, and to point out behaviors that need correction. However, negative humor might not work in politically correct cultures where free speech is severely restricted and people are easily offended. In fact, even positive humor might not be accepted in such an environment.

The purposes of this paper are to uncover the meaning of negative humor through an extensive literature review and qualitative research, and to develop a scale to

measure negative humor in organizations. To achieve these goals, this paper begins with an examination of the theoretical basis of negative humor followed by qualitative research that identifies behavioral antecedents of negative humor. Next, the scale is developed using established techniques from the literature.

Literature Review

Theoretical Foundation of Negative Humor

There are three theories of humor that play integral roles in the use of negative humor: incongruity and resolution (Duncan, 1985), superiority (de Koning & Weiss, 2002), and disposition (Wicker, Barron, & Willis, 1980; Zillman, 2002) theories. Humor has at least three players: the initiator (one who tells the joke), focus (person or thing used as the butt of the joke), and target(s) (those to whom the joke is presented) (Lundberg, 1969). These three roles do not necessarily have to be three distinct people, since one person can assume two roles. For example, individual 'A' may tell a joke about individual 'B' directly to 'B,' thereby making 'B' the focus and target. Likewise, 'A' may tell a joke about himself or herself, making 'A' the initiator and focus.

Incongruity Theory

Incongruity theory suggests that humor comes from the unexpected delivery of disjointed information or surprising pairings of ideas (Duncan, 1985). Resolution theory takes the process one-step further by proposing that joke incongruence is not where humor is created, it is created by resolving incongruity (Schultz, 1976). For example, there is a W. C. Fields joke in which someone asks, "Mr. Fields, do you believe in clubs for young people?" Fields responds, "Only when kindness fails." Here humor is enjoyed when one realizes the incongruity between the two meanings of *club* used in the question and answer. With negative humor, incongruity is constructed by using someone, or something, as the focus of humor where there is an intent to degrade the focus.

Superiority Theory

Superiority theory builds on incongruity theory by employing the same method of eliciting laughter but with one differentiating feature. Disparaging humor is initiated and enjoyed by those who are dominant or wish to be. Bergen (1998) held that disparagement humor is frequently used to express superiority. Disparagement humor is used to victimize, belittle, and cause others some type of misfortune, which is often construed as an act of aggression (Zillman, 1983). In doing so, people who use this humor want to elevate themselves above others and feel superior (Nevo, 1985). The result is their feeling superior, usually at another person's expense, and, in some cases, they do achieve (or perceive to achieve) a higher rank or status (de Koning & Weiss, 2002).

Methodology

Focus Group Research

Focus group research is used to increase the likelihood of producing valid constructs (Churchill, 1979). The qualitative research presented in this paper was conducted by using two focus groups in different locations, each consisting of eight individuals who had full-time corporate positions. A variety of participants in terms of gender, experience, industry, and management were recruited on a voluntary basis. Across the two focus groups, there were 50% female participants and 50% male participants. Also included were 25% senior-level managers, 25% mid-level managers, and 50% entry-level employees. The average work experience was 6.5 years.

The participants were asked numerous questions about experiences with negative humor and possible negative consequences. The probing started with the contextual questions, such as where and when the participants had organizational experiences in negative humor. Next, the participants were prompted to reflect how the negative humor messages were delivered and for what purpose. Lastly, the participants were asked about the consequences of negative humor. Testimonials were elicited regarding panel members' experiences as the target, focus, and initiator in negative humor. In this process, the participants were encouraged to elaborate or comment on others' inputs. Each focus group lasted about two hours. Results were transcribed, and after structural conceptualization (Trochim & Linton, 1986; Shaver et al., 1987), two dimensions of negative humor were discovered: domination and denigration.

Domination. Respondents described negative humor as a tool to “put-down” others for either pleasure or personal gain. They either instigated or joined groups using negative humor to gain an advantage over a person or group. Disparaging humor was used against other people who could be intimidated, resulting in fear or a sense of inferiority. When in their presence, people did not feel in control as compared to when with a group of peers.

A second focus group commented on the first year in their current job. Several peers would wait until a group was together to tell a negative joke about another worker embarrassing him and making him want to avoid group gatherings. This person felt that the initiator(s) did so because of jealousy for a job well done. The initiator was trying to influence other targets to feel some negativity toward the focus in an effort to have the targets look up to him as a leader. The respondents commented how, when in this same social group, the person trying to emerge as the leader would target a group member with negative humor thereby elevating his status within the group. The actions by the initiator were rewarded by the negative reaction of the focus and group status heightened when the focus was among his peers (Follman et al., 2011). These actions and results illustrated the concept of dominating others through the use of negative humor within and outside of groups.

Denigration. A second theme emerged as the focus groups related a different side to their observance of negative humor. Panel members expressed discomfort when “socially trapped” in a situation where certain types of negative humor were used that they judged to be offensive. In these cases, the respondents were not the focus of the humor but intended targets or those meant to be impressed by the initiator. They were

unanimous in their behavior during the negative humor. Each admitted to remaining quiet during the joke pretending to enjoy it, all the while knowing that they should either say something or leave but chose to do neither. When in this situation, they felt belittled, which resulted in anger, frustration, and self-loathing. The result for most was that they felt “small” or “inadequate” in the presence of the negative humor initiator. In doing so, they felt very guilty for not having reacted differently and in effect felt denigrated because of their guilt over their inaction.

These findings are consistent with superiority theory (de Koenig & Weiss, 2002) in that individuals often use disparaging jokes in an attempt to gain superiority. The aggression and open hostility exhibited by initiators were also congruent with Bergen (1998) who mentioned that negative humor was used to express hostility toward another person in an effort to gain superiority.

Generation of Questionnaire Items

Focus group results were used to generate an initial list of items to measure the behavioral aspects of negative humor. A total of 43 Likert-type questions were formed. Existing research constructs used were also consulted in order to assess the aggressive manner of humor (Bergen, 1998; Martin et al., 2003). The purpose of evaluating existing research constructs was to differentiate the measurement items of negative humor from the aggressive humor measures. Items were reviewed by several independent management researchers and modified based on their suggestions. All items used a 7-point Likert-type scale (1 = totally disagree, 7 = totally agree). In a pre-test, data were collected from a sample of 100 MBA students who had full-time jobs. Respondents had an average of 5 years in the workforce and a mean age of 28. Data testing began with principal component analysis using varimax rotation. Appraisal of each individual item was performed by considering both loading scores as well as the item's relevance to theory. Following suggestions by Nunnally (1978), 13 items loaded at .5 or above respectively on two factors with high internal reliability values (.91 and .73 respectively).

Statistical Results

Replication analysis was conducted using a second sample. The MBA students with full-time jobs utilized in the pre-test were chosen to interview up to five of their coworkers who held positions at the same or higher organizational level as themselves. Interviewers were instructed to have respondents complete the questionnaire and add a daytime phone number for verification purposes. A total of 214 respondents returned the questionnaire in a one-month period. These respondents were contacted by phone and asked if they had answered a survey within the previous week for a university student. One hundred percent of the respondents selected answered that they had.

The demographics were very close to the initial sample with an average of 5 years work experience and a mean age of 27. Using maximum likelihood extraction method and an oblimin with Kaiser normalization rotation, replication factor analysis produced the same two factors with adequate loadings and reliabilities. Results are reported in Table 1.

Table 1: Factor Loadings for Exploratory Factor Analysis of Negative Humor

Variable Name	Items	Factor Loadings	
		Domination	Denigration
stopjoke	If a coworker is telling an offensive joke, some people may feel mad.		0.75
walkaway	If someone is telling a put-down joke, other will walk away.		0.74
okfriend	It is not o.k. for my good friend who is from another ethnic group to tell jokes about my ethnic group.		0.60
angry	It makes people angry when hearing a put-down joke about them.		0.80
badmood	If it were me, I would get in a bad mood when people around me tell offensive jokes.		0.86
complaint	When I tell a put-down joke at work, I am aware of complaints.		0.60
tease	If someone makes a mistake, I will often tease them about it.	0.66	
othergroup	I enjoy telling jokes about people from other ethnic groups.	0.72	
advantage	Telling a put-down joke about someone to their face could help me gain advantage over them.	0.66	
happiness	I feel a sense of happiness when I tell put-down jokes about people I do not like.	0.63	
feelbetter	When I have a bad day, telling a put-down joke about someone makes me feel better.	0.70	
enjoyment	I feel a sense of enjoyment when I tell put-down jokes about other people.	0.93	
geteven	When I tell a put-down joke about my boss, I feel like I'm getting even.	0.91	
Cronbach's Alpha		0.81	0.73

Divergent Validity

To test for divergent validity, the questionnaire incorporated all 13 items from the initial exploratory analysis along with the Aggressive Humor Scale (Martin et al, 2003). Correlations were calculated and comparisons made between the Aggressive Humor Scale and the negative humor factors (see Table 2). Low and/or non-significant correlations were realized between these components (.07 to .24), indicating divergent validity.

Table 2: Correlations for Divergent Validity

		Aggressive Humor	Denigration	Domination
Aggressive Humor	Pearson Correlation	1.00		
	Sig. (2-tailed)			
	N	214		
Denigration	Pearson Correlation	0.12	1.00	
	Sig. (2-tailed)	0.07		
	N	214	214	
Domination	Pearson Correlation	0.07	0.24	1.00
	Sig. (2-tailed)	0.31	0.02	
	N	214	214	214

Confirmatory Factor Analysis

Following Joreskog and Sorbom's (1993) instructions, multiple procedures were adopted to test the measurement model using confirmatory factor analysis. Each factor was measured separately by evaluating fit of appropriate indicators to negative humor, as well as fit of negative humor dimensions.

Denigration. There were 6 items, each having significant path coefficients, used as indicators of *denigration*. As seen in Table 3, the root mean square error of approximation (RMSEA), goodness-of-fit index (GFI), adjusted goodness-of-fit (AGFI), comparative fit index (CFI), and Tucker-Lewis index (TLI) all indicated a good level of fit when compared to Hu and Bentler's (1999) and Rigdon's (1996) multiple criteria. All factor loadings were above (.60 to .86) the minimum value of .5 (Nunnally, 1978).

Domination. Seven items were significantly related to domination. Once again, indices of fit, as seen in Table 3, point toward a good fit. The factor loadings were all above the lower limit of .5 (Nunnally, 1978), having standardized values ranging from .66 to .93.

Table 3: Fit Indices

Construct	χ^2	d.f.	<i>p</i> -level	RMSEA	GFI	AGFI	CFI	TLI	CR ^a	VE ^b
Denigration	9.94	7	0.19	0.04	0.99	0.95	0.99	0.99	0.86	0.49
Domination	22.03	12	0.04	0.06	0.97	0.93	0.99	0.98	0.87	0.54
Composite	134.63	60	0.00	0.08	0.91	0.87	0.95	0.93		
a	Construct Reliability									
b	Variance Extracted									

The full measurement model was then estimated. Second order confirmatory factor analysis was calculated. When examining the relationship of each dimension to the overall negative humor, denigration and domination had standardized path coefficients of .60 and .57, respectively (see Table 4).

Discriminant validity was tested between the two dimensions. Two factor analyses yielded a multi-item scale of negative humor. Each of the two factors displayed good reliability and good face validity. Items are representative of dominating attitudes as well as the desire to create a negative humor situation. Once again relying on Joreskog and Sorbom (1993), discriminant validity with the full model was assessed for the two first-order factors. A two-construct measurement model was calculated in which the correlation between denigration and domination was fixed at one as suggested by Bagozzi (1981) and Anderson and Gerbing (1988). This model produced a poor fit: $\chi^2(64) = 254.518$, $p = .000$, RMSEA = .118, GFI = .868, AGFI = .813, CFI = .862, and TLI = .832. When correlation between the constructs was unconstrained, model fit was significantly improved: $\chi^2(61) = 153.53$, $p = .000$, RMSEA = .084, GFI = .905, AGFI = .859, CFI = .933, and TLI = .914. Therefore, it can be inferred from this comparison that there is evidence of discriminant validity.

Table 4: *Standardized Regression Weights*

Path		Estimate
Denigration	→ Neghumor	0.601
Domination	→ Neghumor	0.571
stopjoke	→ Denigration	0.876
walkaway	→ Denigration	0.735
okfriend	→ Denigration	0.476
angry	→ Denigration	0.746
badmood	→ Denigration	0.619
complaint	→ Denigration	0.698
tease	→ Domination	0.662
othergroup	→ Domination	0.696
advantage	→ Domination	0.724
happiness	→ Domination	0.739
feelbetter	→ Domination	0.734
enjoyment	→ Domination	0.686
geteven	→ Domination	0.697

All the standardized coefficients are significant at .01 level.

Discussion of Results

Using qualitative and quantitative analyses, the contention that negative humor has multiple dimensions was supported. Findings suggested that negative humor has at least two major dimensions: domination and denigration. The discovery of domination is significant for humor research. It was shown to be a divisive tool that could be employed to segregate, as well as to assert dominance. Denigration was found to be used to establish superiority in organizations. Previous research addressed the concept of negative humor as a debilitating action within organizations. Although negative humor can create anger and frustration for the receiving side, it can also act as a tool in gaining and maintaining power groups (Zillman & Stocking, 1976). It reveals the constructive side of negative humor. Previous research supported this position by suggesting that individuals use humor to gain advantage over opponents, exert pressure, and to influence others (Decker & Rotondo, 2001; Quinn, 2000; Collinson, 2002).

Managerial Implications

This study illustrated negative humor's constructive uses, as well as its harmful outcomes. The Negative Humor Questionnaire measured individuals' propensity to use negative humor as a means to gain power and privilege in organizations. It can be administered to job applicants as a screening tool in the hiring process. It can guide human resource managers to determine how comfortable prospective employees are in

the presence of negative humor and their inclination to use negative humor to control others. Respondents who score very high on the scale may end up creating problems for the company. Frequent use of teasing, ridicule and other types of negative humor could result in a hostile work environment, which can constitute grounds for lawsuits.

Conversely, individuals who score very low may have a tendency to be too easily offended by even harmless negative humor. Although the hiring decision may not hinge on this score, it should serve as a possible forecast of the ability to withstand moderate amounts of teasing or other forms of common adult humor. These employees could also present potential litigation problems. Because their threshold for negative humor is extremely low, even small amounts of teasing may result in negative feelings and low satisfaction with work. The Negative Humor Questionnaire could aid in selecting team members in order to balance membership with certain tolerance and usage levels of negative humor.

Limitations and Further Research Recommendations

One methodological limitation of this research is that samples were taken from one area in the U.S. However, cultural differences play a role in shaping humor perceptions (Romero et al., 2007). Further research using different areas of the country as well as international studies will be necessary to better understand negative humor. As Kalliny, Cruthirds, and Minor (2006) pointed out, international differences in humor styles do exist in organizations. Validation from the study of other countries is important for explaining this dynamic in multi-national organizations. Testing the Negative Humor Questionnaire in situations as described above will further validate the scale's predictive validity. In addition, continued research into the antecedents and consequences of using negative humor will advance humor research, thereby developing this very important area in organizational behavior.

In both the qualitative study and quantitative analysis, the participants' differences in the perception of negative humor based on important demographic variables, such as gender, age, education, ethnic groups, religion, etc. were not investigated. Due to the exploratory nature of this study, the sample contained MBA students with different types of jobs and diverse backgrounds. This group of participants may not experience the same type of negative humor at work because of the different corporate culture shaped by gender, age, and ethnic composition. For instance, age and educational level have been shown to influence humor styles (Carretero-Dios, Perez, & Buela-Casal, 2010; Vitulli & Barbin, 1991). Thus, the use of negative humor may more likely be used by younger and less educated individuals in the workplace because of the learned manners accumulated through educational and social experience. In addition, Kalliny et al. (2006) found that men tend to use more negative humor than women regardless of cultural background. Thus, differences in the use of negative humor can be expected based on many demographic variables. These demographic moderators should be articulated in future studies. In studying negative humor, future research should also consider the moderating influences of organizational variables, such as level of competition (high or low), job autonomy (high or low), type of organization (private or governmental), and brand equity. These variables may also significantly influence the degree and extent of negative humor.

Conclusion

This paper expanded on a concept that has been discussed in the literature, but never identified and researched empirically. As such, this study added significant value to the literature and to practitioners. It also provided a basis for further study of negative humor. The adoption of membership rules, as well as the relationship that forms between initiator, focus, and targets of negative humor, are future areas that should be addressed through future empirical research.

References

- Albrecht, G. L. (1999). Disability humor: What's in a joke? *Body & Society*, 5(4), 67-74.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103, 411-423.
- Arendt, L. A. (2009). Transformational leadership and follower creativity: The moderating effect of leader humor. *Review of Business Research*, 9, 100-106.
- Avolio, B. J., Howell, J. M., & Sosik, J. J. (1999). A funny thing happened on the way to the bottom line: Humor as a moderator of leadership style effects. *Academy of Management Journal*, 42, 219-227.
- Bagozzi, R. P. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18, 375-381.
- Bergen, D. (1998). Development of the sense of humor. In W. Ruch (Ed.), *The sense of humor: Explorations of a personality characteristic*. Berlin, Germany: Mouton de Gruyter.
- Boxer, D., & Cortés-Conde, F. (1997). From bonding to biting: Conversational joking and identity display. *Journal of Pragmatics*, 27, 275-294.
- Carretero-Dios, H., Perez, C., & Buela-Casal, G. (2010). Assessing the appreciation of the content and structure of humor: Construction of a new scale. *Humor: International Journal of Humor Research*, 23, 307-325.
- Churchill, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, 16(1), 64-73.
- Coates, J. (2007). Talk in a play frame: More on laughter and intimacy. *Journal of Pragmatics*, 39(1), 29-49.
- Collinson, D. L. (2002). Managing humor. *Journal of Management Studies*, 39(3), 269-288.
- Davies, C. (1982). Ethnic jokes, moral values and social boundaries. *The British Journal of Sociology*, 33, 383-403.
- de Koning, E., & Weiss, R. L. (2002). The relational humor inventory: Functions of humor in close relationships. *The American Journal of Family Therapy*, 30, 1-18.
- Decker, W. H., & Rotondo, D. M. (2001). Relationships among gender, type of humor, and perceived leader effectiveness. *Journal of Management Issues*, 8, 450-465.
- Dreyfack, R. (1994). Where to draw the line on horseplay. *Plant Engineering*, 48(10), 66.
- Duncan, W. J. (1985). The superiority theory of humor at work. *Small Group Behavior*, 16, 556-564.
- Duncan, W. J., Smeltzer, L. R., & Leap, T. L. (1990). Humor and work: Applications of joking behavior to management. *Journal of Management*, 16, 255-278.
- Follman, L. C., Blanchard, A. L., Cann, A., & Stewart, O. J. (2011). Humor at work:

- Coping with stress and increasing organizational identity. *American Psychological Association Convention Presentation*, 6.
- Fraley, B., & Aron, A. (2004). The effect of a shared humorous experience on closeness in initial encounters. *Personal Relationships*, 11, 61-78.
- Fox, S., & Amichai-Hamburger, Y. (2001). The power of emotional appeals in promoting organizational change programs. *Academy of Management Executive*, 15, 84-93.
- Gruner, C. R. (1997). *The game of humor: A comprehensive theory of why we laugh*. New Brunswick, NJ: Transaction.
- Holmes, J., & Marra, M. (2002). Having a laugh at work: How humor contributes to workplace culture. *Journal of Pragmatics*, 34, 1683-1710.
- Horseplay can hurt. (2002). *Issues & Answers in Leadership for the Front Lines*, 430.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1-55.
- Joreskog, K. G., & Sorbom, D. (1993). *LISREL VII: Analysis of linear structural relations by the method of maximum likelihood*. Chicago: National Education Resources.
- Juni, S., & Katz, B. (2001). Self-effacing wit as a response to oppression: Dynamics in ethnic humor. *Journal of General Psychology*, 128(2), 119-143.
- Kalliny, M., Cruthirds, K., & Minor, M. (2006). Differences between American, Egyptian and Lebanese humor styles: Implications for international management. *International Journal of Cross Cultural Management*, 6(1), 121-134.
- Lundberg, C.C. (1969). Person-focused joking: Pattern and function. *Human Organization*, 28, 22-28.
- Martin, R. A., Puhlik-Doris, P., Larsen, G., Gray, J., & Weir, K. (2003). Individual differences in uses of humor and their relation to psychological well-being: Development of the Humor Styles Questionnaire. *Journal of Research in Personality*, 37(1), 48-78.
- Morris, M. W., Williams, K. Y., Leung, K., & Larrick, R. (1998). Conflict management style: Accounting for cross-national differences. *Journal of International Business Studies*, 29, 729-747.
- Mueller, C. W., DeCoster, S., & Estes, S. B. (2002). Sexual harassment in the workplace: Unanticipated consequences of modern social control in the organization. *Work and Occupations*, 28, 4, 411-446.
- Nevo, O. (1985). Does one ever really laugh at one's own expense? The case of Jews and Arabs in Israel. *Journal of Applied Psychology*, 49(3), 799-807.
- Nunnally, J. C. (1978). *Psychometric theory*. New York: McGraw-Hill Book Company.
- Quinn, B. A. (2000). The paradox of complaining: Law, humor, and harassment in the everyday work world. *Law and Social Inquiry*, 25, 1151-1185.
- Rigdon, E. E. (1996). CFI versus RMSEA: A comparison of two fit indexes for structural equation modeling. *Structural Equation Modeling*, 3(1), 369-379.
- Romero, E. J. (2005). The effect of humor on work effort and mental state. *International Journal of Work Organization and Emotion*, 1, 137-149.
- Romero, E. J., Alsua, C. J., Hinrichs, K. T., & Pearson, T. R. (2007). Regional humor differences in the United States: Implications for management. *Humor: International Journal of Humor Research*, 20, 189-201.

- Romero, E. J., & Arendt, L. A. (2011). Variable impacts of humor styles on organizational outcomes. *Psychological Reports, 108*(2), 649-659.
- Romero, E. J., & Cruthirds, K. W. (2006). The use of humor in the workplace. *Academy of Management Perspectives, 20*, 58-59.
- Romero, E. J., & Pescosolido, A. T. (2008). Humor and group effectiveness. *Human Relations, 61*, 395-418.
- Schultz, T. R. (1976). A cognitive development analysis of humor, In A.J. Chapman & H.C. Foot (Eds.), *Humour and laughter: Theory, research and applications* (pp. 11-36). London: John Wiley & Sons.
- Shaver, P., Schwartz, J., Kirson, D., & O'Connor, C. (1987). Emotion knowledge: Further exploration of a prototype approach. *Journal of Personality and Social Psychology, 52*(6), 1061-1086.
- Taylor, K. R. (2001). Is hazing harmless horseplay? *Education Digest, 67*(2), 25-30.
- Terrion, J. L., & Ashforth, B. E. (2002). From 'I' to 'We': The role of putdown humor and identity in the development of a temporary group. *Human Relations, 55*(1), 55-88.
- Trochim, W., & Linton, R. (1986). Conceptualization for evaluation and planning. *Evaluation and Program Planning, 9*, 289-308.
- United States Merit Systems Protection Board. (1994). Sexual harassment in the federal workplace: Trends, progress, continuing challenges.
- Vitulli, W. F., & Barbin J. M. (1991). Humor-value assessment as a function of sex, age, and education. *Psychological Reports, 69*, 1155-1164.
- Wicker, F. W., Baron, W. L., & Willis, A. C. (1980). Disparagement humor: Dispositions and resolutions. *Journal of Personality and Social Psychology, 39*, 701-709.
- Zillman, D. (1983). Disparagement humor, In P. E. McGhee & J .H. Goldstein (Eds.), *Handbook of Humor Research* (pp. 85-108). New York: Springer-Verlag.
- Zillman, D., & Stocking, S. H. (1976). Putdown humor. *Journal of Communication, 26*(3), 154-163.

Structure-Based Alliance Ambidexterity: An Empirical Study of the American Motion Picture Industry

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A central and recurring theme in organizational scholarship is the importance of recognizing and dealing with stability and change, along with accommodating the conflicting demands they often present. March and Simon (1958) argued that organizations can improve their performance by separating units that are taking advantage of existing successes from those that are trying to discover new opportunities. Burns and Stalker (1961) argued that mechanistic structures are better in a stable environment and organic structures are more effective under conditions of change. Thompson (1967) considered that both efficiency in established practices and flexibility in developing new practices were cornerstones of organizational effectiveness. He argued that without efficiency, organizations' competitive advantage would suffer, and without flexibility, organizational inertia could lead to fatal entrapment in outmoded routines and procedures. Duncan (1976) agreed that firms should strive for a blend of efficiency and flexibility, and he coined the term 'organizational ambidexterity' for that combination. Tushman and O'Reilly (1996) followed a similar approach when they defined ambidexterity as a firm's ability to be both efficient in the short term as well as flexible in the long term. Achieving efficiency and flexibility, as March (1991) suggested, requires organizations to perform two types of competing and complementary activities: exploitation and exploration. Exploitation aims at improving organizational alignment, stability, and control. Exploration focuses on increasing learning scope, experimentation, and adaptation. March noted that an organization should "...engage in sufficient exploitation to ensure its current viability and, at the same time, devote enough energy to exploration to ensure its future viability" (March, 1991, p. 105).

Central to organizational ambidexterity theorizing is the importance of achieving a balance between exploitation and exploration activities, which can contribute to organization performance. Scholars have identified a variety of possibilities for combining exploitation and exploration activities (Raisch et al., 2009). Internally, organizations can combine exploitation and exploration activities either consecutively or concurrently. When combined consecutively, firms shift back and forth between exploitation and exploration, so they engage in both activities, but not at the same time (Nickerson & Zenger, 2002). When combined concurrently, firms engage in exploitation and exploration at the same time, but adopt different methods of doing so. A structural approach separates exploitative and exploratory activities into different units of an organization (Brown & Eisenhardt, 1997). A contextual approach employs organizational systems that induce firm members to effectively separate their work into exploitation and exploration tasks. Here, the systems create a context favorable to ambidexterity by enhancing members' shared vision, support, and trust. Regardless of the specific method used to combine exploitation and exploration within a firm, the "ambidexterity hypothesis" suggests that firms pursuing a balance of exploitation and exploration, rather than an emphasis on one or the other, will exhibit better performance than firms that do not (March, 1991; Levinthal & March, 1993; Tushman & O'Reilly, 1996).

Recently, researchers have extended the ambidexterity hypothesis from the organization to the inter-organizational level. The term "alliance ambidexterity" is used for firms that use external partners to expand their resource space to achieve a balance between exploitation and exploration (Tiwana, 2008; Lavie & Rosenkopf, 2006; Rothaermel & Deeds, 2004; Cohen & Levinthal, 1990). Three types of alliance ambidexterity have been identified (Lavie & Rosenkopf, 2006): attribute, function, and structure. Attribute alliance ambidexterity occurs when a firm balances its organizational similarities (exploitation) and differences (exploration) with those of its partner(s). Functional alliance ambidexterity involves balancing a firm's upstream and downstream value chain activities with those of its external partners (e.g., exploitation through knowledge-leveraging marketing/production and exploration through knowledge-generating R&D). Structure-based alliance ambidexterity seeks to balance a firm's repeat partners (exploitation) and its new partners (exploration), a configuration that mirrors the structural approach to ambidexterity at the intra-organization level. Here, an organization can align with repeat partners to exploit efficient interactions and collaborate with new alliance partners to explore novel learning experiences (Koza & Lewin, 1998; Lavie & Rosenkopf, 2006; Park, Chen, & Gallagher, 2002; Rothaermel, 2001; Rothaermel & Deeds, 2004).

This study derives from three key limitations of current knowledge of the structural approach to alliance ambidexterity. First, there are a limited number of studies that investigated structure-based alliance ambidexterity, as shown by Nosella, Cantarello, and Filippini's (2012) bibliometric analysis of the ambidexterity literature. Second, while the "ambidexterity hypothesis" has largely received positive confirmation at the intra-organizational level (Cao, Gedajlovic, & Zhang, 2009; Hess & Rothaermel, 2011; He & Wong, 2004; Jansen, Van den Bosch, & Volberda, 2006; Sidhu, Commandeur, & Volberda, 2007), empirical results on the effect of structure-based alliance

ambidexterity on firm performance are mixed (Lin, Yang, & Demirkan, 2007; Lavie, Kang, & Rosenkopf, 2011; Lavie & Rosenkopf, 2006). Lavie et al. (2011) showed that having a balance of new and repeat partners does not affect firm performance, while Lin et al. (2007) found positive performance effects for such balance, at least in some of the cases studied. Third, researchers have begun to speculate on the interdependence between alliance ambidexterity and a firm's internal mode of organizing (Stettner & Lavie, 2013; Russo & Vurro, 2010). Structural alliance ambidexterity can entail trade-offs among firms' routines as well as increase organizational complexity. Thus, it is not clear whether a firm's internal mode of organizing, known as its "organization form," conditions the effect of structure-based ambidexterity on performance.

The purpose of this study is to address this limited understanding of how structure-based alliance ambidexterity (i.e., achieving a balance between new partners and repeat partners) relates to firm performance. Theoretically, a nuanced explanation of the ambidexterity hypothesis will be provided by integrating insights from the alliance and organizational ecology literatures into the ambidexterity framework. Empirically, the study examines the moderating effect of organization form (i.e., generalist vs. specialist) on the hypothesized relationship between structural alliance ambidexterity and firm performance. It provides a comprehensive analysis of the structure-based alliance ambidexterity hypothesis in the American film industry, a context in which inter-organizational alliances are prevalent.

First presented will be a theoretical justification for the structural ambidexterity hypothesis, including a refinement to account for organizational form. Then, the setting of the study is described and the research method and empirical results explained. The paper will conclude with limitations of the study and directions for future research.

Theory & Hypotheses

Alliance Ambidexterity

Organizations engage in boundary-spanning activities to reduce information uncertainty and to minimize resource dependency on the external environment, thereby increasing their overall survival chances (Scott, 1995). Along these lines, organizations form strategic alliances with other organizations to share risks and to promote joint learning through utilizing complementary assets in developing new technologies, products, and services (Gulati, 1998; Dyer & Singh, 1998). Extending March's (1991) work on exploration-exploitation, Koza and Lewin (1998) introduced the alliance ambidexterity concept to reflect a combination of partner-based exploitative and exploratory activities that allow an organization to simultaneously align its existing inter-organizational capabilities with its adaptation to environmental changes. Recent research illustrates that organizations engaging in external exploration and exploitation efforts with alliance partners tend to achieve greater overall balance in ambidexterity than relying on internal modes alone (Stadler, Rajwani, & Karaba 2013; Lavie & Rosenkopf, 2006; Tiwana, 2008).

Structure-based Alliance Ambidexterity and Performance

The fundamental driving force behind alliance formation is that together, partners

can accomplish goals that they would not be able to accomplish alone (Provan & Sydow, 2008). Such arrangements "... are a vivid example of voluntary cooperation in which organizations combine resources to cope with the uncertainty created by environmental forces beyond their direct control" (Gulati & Gargiulo, 1999, p. 1441). The actual methods whereby organizations combine resources to cope with uncertainty can be understood as a special form of social capital, the set of connections among people that facilitate coordination and cooperation for mutual benefit or performance (Putnam, 1993). When the connections are among groups of people, or organizations, social capital becomes alliance capital, sometimes called aggregate social capital or relational capital (Gulati & Kletter, 2005). Alliance capital has been theorized to have a positive relation with group performance (Knack & Keefer, 1997), and empirical work has verified the relation. For example, one study of a village in rural Tanzania showed that the average number of organizational memberships in the village had a significant positive impact on income level (Narayan & Princhett, 1999). Similar cases exist in competitive business situations. Uzzi (1996), for example, examined the New York apparel economy and found that firms organized in alliances have higher survival chances than those with only arm's-length market relationships.

The alliance literature identifies four main sources of social capital at the inter-organizational level: efficiency, knowledge, trust, and status. Within each of these sources, an exploitative and exploratory aspect can be identified. First, companies can improve efficiency by sharing costs through alliances (Doz & Hamel, 1998), something possible with both new and repeat partners. Tapping into resources of new partners can be an effective way of sharing complimentary assets, an important source of cost savings (Teece, 1986) and a way to enhance alliance capital. Forming alliances with previous partners tends to increase trust and reduce opportunism, thereby lowering the need for control mechanisms (Gulati, 1995) and helping to reduce costs. Cost reductions of this kind are also termed "allocative efficiency" (North, 1990), and such savings are a benefit of exploitative behavior in alliances.

Second, companies in alliances can share each other's knowledge and capabilities, both tangible and intangible (Mowery, Oxley, & Silverman, 1996; Benner & Tushman, 2003; Rothaermel, 2001; Rothaermel & Deeds, 2004; Teece, 1992; Das & Teng, 2000; Dyer & Singh, 1998). Social capital theory places the possession and transfer of knowledge at the heart of the creation of social benefits (Burt, 1992; Adler & Kwon, 2002). Echoing the exploitation/exploration theme, Simon wrote, "... an organization learns in only two ways: (a) by the learning of its members, or (b) by ingesting new members who have knowledge the organization didn't previously have" (Simon, 1991, p. 176). Kogut and Zander (1993) illustrated the benefits that firms can harness by combining their existing knowledge stock derived from pre-established network partners with the novel learning experience gained from new partners. Research on alliances with previous partners has shown that a major element in such behavior is the trust that repeat partners build up over time (Gulati, 1995; Gulati & Gargiulo, 1999). Such trust acts as a catalyst for deepening and refining firms' knowledge and capabilities. Finding new partners, on the other hand, provides an opportunity to learn new skills and acquire new knowledge for all parties involved (Hamel, Doz, & Prahalad, 1989; He & Wong, 2004; Koza & Lewin 1998). Dittrich, Duysters, and de Man (2007),

for instance, showed that new alliance partnerships enabled IBM to transform from a hardware manufacturing company into a global service provider.

Third, alliance partners can build trust in their relationships, which can reveal opportunities that might otherwise go unrecognized (Koza & Lewin, 1998). Trust also can improve what has been called “adaptive efficiency,” where the focus is on creativity and learning (Putnam, 1993). Adaptive efficiency results from a spirit of trust and cooperation that enhances the identification of new opportunities, which can be leveraged into improved performance for all alliance partners. New partners, in particular, can offer fresh insights and new perspectives that might otherwise go unnoticed (Lin, 1999).

Fourth, firms can use alliances as a vehicle to transfer status and reputation, which are forms of social capital (Lin, 1990). In the case of both new and repeat partners, alliances with a well-known and established firm can act as an implicit endorsement and a mechanism of transferring status from the high ranking to the less well known organization (Gabbay & Leenders, 1999).

These four sources of alliance capital can increase organization performance. Decreasing the cost of inputs allows a firm to use otherwise spent resources to improve outputs. When a firm can use an alliance to “borrow” another’s assets, such as knowledge or capabilities, it can focus on what it does best, opening up an avenue to improved performance (Gulati & Kletter, 2005). Opportunities are a traditional source of performance enhancement (Andrews, 1971), and alliances can help organizations recognize and take advantage of them. Similarly, performance is often enhanced by status, which can be transferred through an alliance partner more readily than being developed internally from the ground up (Stuart, 2000).

While having repeat partners (exploitation) enables firms to leverage accumulated partnering experience, deepen mutual trust, and consolidate shared knowledge bases (Hoang & Rothaermel, 2005; Gulati & Gargiulo, 1999; Rosenkopf & Nerkar, 2001), establishing ties with new partners (exploration) enables firms to embrace novel learning experiences, cultivate new opportunities, and expand the structural boundaries of existing alliance networks (Lin et al., 2007). In both cases, a firm can accumulate alliance capital that contributes to its market survival. In addition, having repeat partners increases predictability and reliability of relational capital, which can be a unique source of competitive advantage to firms, particularly in the face of an uncertain environment. This can help to offset the possible uncertainty embedded in new partnerships, allowing firms to be more open in pursuing riskier ventures with new partners. The learning experiences acquired through new partnerships, in turn, can increase a firm’s flexibility and resilience in the market as it moves into uncharted product or market territories. Paradoxically, it can create stability in the long run through forming a portfolio of products, thus hedging against market uncertainty. Additionally, as a firm develops new knowledge and capabilities, it may apply the newly acquired skills to solve existing problems and to increase its appeal to existing partners. Thus, the benefits of having both new and repeat partners can be mutually enforcing and jointly increase a firm’s stability and adaptability in the market, which directly contribute to firm performance. As March (1991, p. 71) explained, “adaptive systems that engage in exploration to the exclusion of exploitation are likely to find

that they suffer the costs of experimentation without gaining many of the benefits. Conversely, systems that engage in exploitation to the exclusion of exploration are likely to find themselves trapped in suboptimal stable equilibria.”

Given the number of performance advantages for having a balance of repeat and new partners:

Hypothesis 1: The degree to which an alliance firm has structure-based alliance ambidexterity (i.e., a balance of new and repeat partners) is positively related to firm performance.

Organization Form as a Moderating Influence

Despite the proposed benefits of organizational ambidexterity, the positive performance effects may depend on organization form. In a recent special issue of the *Academy of Management Journal* devoted to organizational ambidexterity (Gupta, Smith, & Shalley, 2006), the editors cautioned that although the literature generally supports the view that organizations must strive toward a balance or duality of exploitative and exploratory activities, there remains the question of whether specialization in one or the other might be warranted for certain organization forms. Given this preliminary caution about the performance effects of ambidexterity, further investigation of whether the relationship between alliance ambidexterity and firm performance is conditioned on organization form seems warranted.

Organization ecology provides a conceptual base for addressing this possible moderating effect. It categorizes organizations into two forms, generalists and specialists, based on the width of their organization niche or domain (Hannan & Freeman, 1997). Generalists tend to have a broad domain, either offering a wide range of products or services or targeting a wide market while specialists tend to have a limited domain, either providing a narrow set of products or services or targeting a narrow market (Hannan & Freeman, 1989). Domain width influences an organization's interaction with its environment and subsequent adaptation process (Carroll, 1985, 1987; Swaminathan, 1995). Organizations survive to the extent that they are situated in environments that match the limits of their coping capabilities (Carroll, 1985). Compared to specialists, generalists are better able to absorb the impact of industry change and adapt to a wider environment because of the diversity of their capabilities, which can be shifted and rearranged. Because specialists serve a narrow market or have a small range of products or services, they have a corresponding narrow set of capabilities, which cannot be shifted readily to other uses.

Organization ecology can be applied to partnerships in alliances, which are part of the environment for their members. With respect to alliances, generalists are better able than specialists to shift and rearrange their repertoire of capabilities by combining the advantages of having repeat partners with the benefits of attaining new partners. Specialists can be at a disadvantage trying to apply their narrow set of resources and capabilities to an ambidextrous combination of new and repeat partners because of their inability to efficiently shift their specialized capabilities (Lavie, Kang & Rosenkopf, 2009). The underlying dynamics of this difference between generalists and specialists can be explained from an organization routine perspective (Stettner &

Lavie, 2013; Reuer, Zollo, & Singh, 2002; Dosi, Nelson, & Winter, 2000). Managing repeat alliance partners relies on organizations' exploitation routines, which involve leveraging, integrating, and fine-tuning existing knowledge and capabilities to achieve alignment, efficiency, and stability. Establishing new partners relies on organizations' exploration routines, which involve searching for new knowledge and relational capital to increase adaptability, flexibility, and change. Balancing exploitation and exploration requires organizations to perform both routines simultaneously and therefore imposes challenges on firms less capable in managing the dual demands. The tension inherent in the competing routines can increase organization complexity and inflict severe resource constraints on organizations. Compared to specialists, generalists are accustomed to developing a diverse set of capabilities to satisfy the demand of a broad market and are in a better position to deal with this set of challenges. To survive in a broad market, generalists need to develop managerial practices to efficiently deploy resources and to generate synergies across different customer domains. In dealing with a more complex environment, generalists are more equipped for balancing exploitation and exploration routines than specialists.

Because generalists are better equipped than specialists to deal with the dual demands of exploitation and exploration, they can capture greater performance benefits than specialists through assiduously combining the disparate elements in alliances and cultivating the wide range of possibilities presented by new and repeat partners (Gulati & Singh, 1998; Reuer & Arino, 2007). When firms are too specialized to engage in a combination of exploitative and exploratory activities, Van Looy, Martens, and Debackere (2005, p. 208) pointed out "...ambidextrous organizations – *ceteris paribus* – tend to be inferior in terms of financial returns." Therefore,

Hypothesis 2: Compared to specialist organizations, generalist organizations' performance will be more positively related to the degree to which they have structure-based alliance ambidexterity (i.e., a balance of new and repeat partners).

Methods

Research Setting

The contemporary motion picture industry was chosen as the site to test the hypotheses because of its economic importance and structure. The industry employs over half a million people in the United States alone (Department of Labor, 2010), yields billions of dollars in domestic theatrical ticket sales, and is the number one American export market. In 2010, \$10.6 billion was spent on attending movies in the United States, with ancillary revenues (e.g., home video) several times higher (Standard & Poor's, 2010).

The structure of the contemporary motion picture industry is advantageous for studying organization alliances. Production companies at all levels generally rely on project-based collaborative structures to produce films (Hall, 2009; Maltby, 2003; Merritt, 2001; Christopherson & Storper, 1989). This form of organizing enabled the examination of the performance nature of alliance ties.

In addition, the contemporary motion picture industry has two main segments: the often-large studios/mini-majors and the many smaller independents or “indies.” The studios, such as Warner Bros. Pictures and 20th Century Fox, consist of a handful of vertically integrated companies with resources extensive enough to finance, produce, and distribute their own films. They also have the means to finance and distribute large-scale films made by others. There are a number of additional firms associated with the studios called “mini-majors,” such as Rogue Pictures and Focus Features; they either function as one of the studio’s internal units or are subject to a studio’s supervision and strategic control. The other segment of the film industry is made up of hundreds of firms that operate outside of the mainstream system. These independent production companies are non-establishment, sometimes to the extent that they function as one-time corporations with primary assets consisting of just the film itself (Rusco & Walls, 2004).

The two segments differ in their fundamental philosophies and production ideologies, and to a certain extent, in the way they organize work (Mezias & Mezias, 2000). Studios and mini-majors focus on producing “blockbuster” or “event” films that cater to the tastes of a large segment of the population and can be released through large numbers of theaters. Independents, on the other hand, often have an anti-Hollywood sentiment and tend to work outside the system, generate their own financing, and make specialized movies with their own unique aesthetic (Merritt, 2001). Because of this narrower focus and lack of a mass-marketing mentality, independents release their films through fewer theaters, often being satisfied with just a handful of outlets or even just one or two. The aesthetic differences reflected in variations in film genres enabled this study to assess production companies along the continuum of generalist and specialist types, where generalists produce a diverse set of genres and specialists target narrow genres such as animation, mystery, action, or romance.

Data Collection

Data collection focused exclusively on film production companies that theatrically released at least one full-length feature in the United States (U.S.) from 2000 to 2005. A number of tiny independent companies do not even release their films to the public and have no box-office revenues (Rusco & Walls, 2004); these companies were excluded from the study. In addition, made-for-television and video movies were not examined. The period of 2000 – 2005 was selected randomly, and other time periods are not *a priori* expected to be different for the hypothesized relationships in this study. Choosing a 5-year span was also arbitrary, with no reason to expect that other periods would yield different results. The key focus here was the relative strength and weakness of relationships among variables within a time span and not the particular span involved. Assessing alliance dynamics over time provides a realistic way to determine both exploitative and exploratory patterns in the industry.

As described above, the contemporary motion picture industry comprises a complex of interrelated firms. To capture this structure, data were assembled into yearly collaboration alliance matrices comprising an aggregated total of 2,517 production companies involved in producing 2,618 feature-length films theatrically released in the U.S. for the years 2000 through 2005.

Data were collected from four main sources: trade publications such as *Variety*, *Hollywood Reporter*, and *Entertainment Weekly*; archival documents from the Academy of Motion Picture Arts and Sciences; online sources such as Internet Movie Database (IMDb) and Box Office Mojo, as well as production companies' individual websites.

Dependent Variable

Firm performance was measured using IMDb data, which reports the opening weekend earnings of films released in the U.S. along with films' accumulated earnings over the period of their exhibition. Although there is some correlation between the two figures (Sharda & Delen, 2006), the accumulation of earnings provides a more complete measure of a film's performance (He & Wong, 2004) and that figure was used as a basis for this study's performance variable [PERFORM]. Because a production company might release a number of films in a year, it was necessary to sum the accumulated earnings over all of a company's films released in 2005 in order to arrive at a final measure of that company's performance.

Independent Variable

The central variable of concern for this study was structure-based alliance ambidexterity. In the context of the cinema industry, a film production company can either produce a movie entirely alone or it can engage with partners to do so. If it engages with partners, they can either be new or repeat partners. Companies with only new partners are defined as purely exploratory, and those with only repeat partners are defined as purely exploitative (Lavie & Rosenkopf, 2006). By definition, structure-based alliance ambidexterity requires that a company have one or more partners. Otherwise, that firm is exploratory. Production companies with no partners for films released in 2005 were excluded from the study. Structure-based alliance ambidexterity [AMBIDEX] is operationalized as a continuous variable and applies to a particular point in time, which is the year 2005 for the present study. A film production company is ambidextrous for the year 2005 to the extent that it had a balance of new and repeat partners for the films it released in 2005. Companies having nothing but repeat or nothing but new partners were considered completely out of balance and coded as zero (0.0). Firms with the same number of repeat and new partners were considered completely balanced and coded as one (1.0). Firms with a combination of repeat and new partners, but in unequal numbers, were coded by those partners' relative numbers, on a continuous scale from zero to one.

Moderating Variable

Organization form was classified along the continuum of generalists and specialists. A widely-used measure of organization form, Blau's index for categorical dissimilarity (Carroll, 1985; Blau, 1977; McPherson, 2004) was used. The index assessed the degree of product diversification [ORGFORM] on the basis of the variety of motion pictures a company produces for a particular year. IMDb consistently reports the genre for theatrically released films, which are separated into categories such as comedy, drama, action, family, thriller, romance, horror, animation, and western. Genre data for each production company's films released in 2005 were assembled and used to calculate

the company's Blau score, the measure of organization form for the present study. A company's Blau score can range from 0 to 1, with generalist firms producing films in a wide variety of genres having relatively high scores compared to specialist producers of films in a narrow variety of genres, which have relatively low scores. Note that this is similar but not identical to the distinction between studios/mini-majors and indies because members of both of these segments may produce either a wide or narrow range of films (Mezias & Mezias, 2000). The interaction between organization form and structure-based ambidexterity for 2005 was used to test the moderating effect of organization form on the structure-based alliance ambidexterity hypothesis.

Control Variables

To provide a rigorous test of the structure-based alliance ambidexterity hypothesis, a number of other factors that could affect firm performance were controlled. For analytical purposes, organization form simultaneously served as a control variable when the interaction term of organization form and structure-based alliance ambidexterity was used to assess the moderating effect of organization form on the structure-based alliance ambidexterity hypothesis.

Geographic diversification. Although empirical examinations of geographic diversification are not conclusive (Tallman & Li, 1996), studies have shown a positive relationship between geographic diversification and organization performance (Qian et al., 2010). With respect to the film industry, many theatrically released movies are exhibited not only in the U.S. but in overseas markets as well. In 2013, for example, 19 of the top 20 all-time box office hits earned more from overseas exhibition than in the U.S. (Box Office Mojo, 2013). A typical measure for geographic diversification is the ratio of sales by foreign subsidiaries to total sales (Geringer, Beamish, & daCosta, 1989), which was adapted for the present study by determining the relative percentage of overseas box office revenue. Such figures are available from IMDb and Variety and were collected for each film released in 2005. The film-based numbers were converted to a company-based score by taking the average of the overseas percentages for all of a company's films for the year, yielding the variable used for analyses [GEODIV].

Investment Risk. A firm's investment risks can be an important determinant of performance (Barney, 1991; Eisenhardt & Schoonhoven, 1996) and have been used both as a control variable in alliance studies (Lin et al., 2007) and as an independent variable hypothesized to affect performance in film studies (Litman, 1983; Chang & Ki, 2005). Film production companies typically establish budgets for their movies, which can range from a few hundred to a thousand dollars for cash-strapped indies to hundreds of millions of dollars for a studio with deep pockets (Finler, 2003). Production budgets depend on the financial holdings a firm either has or can reasonably expect to acquire, thus budgets are a good measure of a production company's investment risk (Litman, 1983; DeFillippi & Arthur, 1998). IMDb and Variety regularly report the budgets of films released in a particular year. Similar to performance measures, however, a figure is needed that reflects not just the budget for one film, but the total budgets for all films produced by a company in a given year. Therefore, an additive variable was developed to represent a firm's investment risk by combining the budgets for all of the films released by the company in 2005 [INVEST].

Slack resources. Slack resources, the difference between a firm's total resources and those necessary to conduct ongoing operations (Cyert & March, 1963), can be an important determinant of firm performance (Daniel et al., 2004). Unused resources can be a source of competitive advantage because they provide a challenge to innovate and an incentive to expand. Moreover, slack resources can provide firms with a potential buffer from environmental shock (Hannan & Freeman, 1989). Because large firms generally have more slack resources than small firms, firm size has been used as an approximate measure of slack resources. Number of employees is a traditional measure of firm size; however, many film companies are private and do not report such figures. Firm output also has been used as a measure of organization size (Dinlersoz & MacDonald, 2009), especially when the output of firms is homogeneous. This is the case for the film industry, where the output of production companies is movies, the number of which can be counted. Both IMDb and *Variety* report the films that companies produce, so a measure can be developed for each production company with respect to the number of films produced in a given year. An additive variable was created to represent the size of each production company by summing the number of films released by the firm in 2005; this was used as the measure of slack resources [SLACK].

Legitimacy. Organization legitimacy can affect firm performance through environmental dependencies. Organizations depend on their environment for resources and information, and legitimacy from societal actors is essential for attaining them. Organizations gain legitimacy from being legally sanctioned, morally allowed, or culturally embedded in their environment (Scott, 2004), which, in turn, can affect their performance. Empirically, organizational legitimacy has been measured indirectly in terms of an organization's age (Hannan & Carroll, 1992). Younger organizations are more likely to die than older firms due to liability of newness (Stinchcombe, 1965; Freeman, Carroll, & Hannan, 1983). They are less likely than their older counterparts to conform to social forces in their environment, proactively select a favorable social environment, or manipulate their environment to make it more favorable (Suchman, 1995), all sources of organizational legitimacy. For the present study, a production company's age was determined by subtracting the year it first produced a film from the year 2005, resulting in the organizational legitimacy variable [LEGIT].

Analysis and Results

Data were analyzed from 490 films produced by 285 companies in 2005. Data for the dependent variable, performance, showed that production company earnings for 2005 ranged from \$2.5 million to \$1.2 billion, with an average of \$98 million. For the independent variable, ambidexterity, 203 companies were exclusively exploratory (having only new partners), 15 were exclusively exploitative (having only repeat partners), and 67 were ambidextrous to some extent (having a mix of new and repeat partners). Eleven companies were fully balanced in their ambidexterity (having the same number of new and repeat partners). The average ambidexterity score, on a scale of 0 (exclusively exploitative or exclusively exploratory) to 1 (fully balanced), was 0.148. Data for the five control variable measures: organization form ranged from 0 (single-genre producer) to 0.89 (highly diversified, multi-genre producer); geographic diversification ranged from 0% to 88% foreign sales; the lowest aggregate company

film production budget was \$1,000 and the highest was \$400,000,000; number of films produced per company ranged from 1 to 13, with an average of 1.73; the average age of firms was 9.7 years, with many in existence for less than 1 year and Paramount Pictures being the oldest at 93 years. The correlation matrix and descriptive statistics for the study variables are shown in Table 1.

Table 1: Descriptive Statistics and Pearson Correlations

	mean	s. d.	1.	2.	3.	4.	5.	6.	7.	8.
1. SLACK		1.73	1.71	1.000						
2. LEGIT		9.66	15.14	0.291	1.000					
3. INVEST ^a	35.42	65.90	0.266	0.417	1.000					
4. GEODIV	0.364	0.268	-0.124	-0.025	0.124	1.000				
5. ORGFORM	0.553	0.265	0.281	0.096	0.378	-0.012	1.000			
6. AMBIDEX	0.140	0.280	0.344	0.188	0.336	-0.069	0.187	1.000		
7. INTERACT	0.186	0.221	0.228	0.264	0.219	0.008	0.057	0.202	1.000	
8. PERFORM ^a	101.72	186.37	0.342	0.412	0.735	0.108	0.395	0.363	0.288	1.000

^a \$millions
n = 285

Ambidexterity and Performance

Hypothesis 1 stated that a firm's performance would be positively related to its structure-based alliance ambidexterity (i.e., having a balance of new and repeat partners). Performance and new partners were considered for the year 2005 and repeat partners were determined for the previous four years (2000-2004). Multiple regression was run on the full sample with PERFORM as the dependent variable, AMBIDEX as the independent variable, and GEODIV, INVEST, LEGIT, ORGFORM and SLACK as the control variables. An interaction term was also included: AMBIDEX*ORGFORM. Regression results support Hypothesis 1, showing a significant coefficient for AMBIDEX ($\beta = 0.085$, $t = 2.05$, $p < .05$). Four of the control variables were significant: INVEST ($\beta = 0.565$, $t = 11.77$, $p < .001$); ORGFORM ($\beta = 0.127$, $t = 3.02$, $p < .01$). SLACK ($\beta = 0.107$, $t = 1.88$, $p < .1$); LEGIT ($\beta = 0.099$, $t = 2.28$, $p < .05$). Control variable GEODIV was not significant. (See Table 2 for further details.)

Moderation of Organization Form on Performance

Hypothesis 2 posited that generalist firms would show a stronger performance effect from a balanced combination of new and repeat partners than specialist firms. The regression analysis included an interaction term to test for a moderator effect on structure-based ambidexterity (INTERACT = ORGFORM*AMBIDEX). Results supported Hypothesis 2, with the coefficient of INTERACT significant ($\beta = 0.091$, $t = 2.30$, $p < .05$). (See Table 2 for further details.)

Discussion

Duncan (1976) hypothesized that firms should strive for a balance of exploitation and exploration, and he coined the term 'organizational ambidexterity' for that combination. Others followed by explaining that at the intra-organizational level, the

combination of exploitation and exploration could occur in a variety of ways, such as structurally, in which the two activities are segregated into different organizational subunits, and contextually, in which the activities are pursued simultaneously within the same subunit. The present study shifted perspective from the intra-organizational to the inter-organizational level of analysis and examined another way of affecting the combination of exploitation and exploration: structure-based alliance ambidexterity in which members engaged both with previous partners (exploit) and new partners (explore) at the same time. This arrangement was hypothesized to lead to superior performance relative to organizations pursuing an exclusively exploitative or exploratory alliance arrangement. Prior empirical support for this hypothesis has been contradictory however.

Table 2: OLS-Regression Results

	Std. Coeff. (Std. Error)	T-Value
AMBIDEX	0.085 (0.043)	2.05**
INVEST	0.565 (0.048)	11.77***
GEODIV	0.059 (0.040)	1.48
ORGFORM	0.127 (0.042)	3.02***
SLACK	0.107 (0.057)	1.88*
LEGIT	0.099 (0.043)	2.28**
AMBIDEX*ORGFORM	0.091 (0.039)	2.30**
N	285	
R ²	0.60	
Adj. R ²	0.59	
F-Statistic	16463.28***	
<u>Significance Levels: *** p < 0.01 ** p < 0.05 * p < 0.1</u>		

^a The dependent variable was worldwide box-office earnings.

Results from this study of 285 firms in the contemporary motion picture industry strongly supported the structure-based ambidexterity hypothesis: firm performance is positively related to structure-based ambidexterity (i.e., having a balance of new and repeat partners). Further analysis revealed that this relationship is not simple but contingent on organization form. Compared to specialists, generalists show a

stronger relation between performance and structure-based ambidexterity. Part of the explanation for this difference between generalists and specialists can be found in the descriptive data, which revealed that 80% of the specialist firms had a score of zero for ambidexterity (meaning they exclusively have either repeat or new partners), while only 3 out of the 14 generalist firms had a score of zero. Specialists firms may not have the resources, experience, and capability to engage with a combination of new and repeat partners, while generalist firms do. The findings suggested that specialist organizations face severe challenges in concurrently managing the competing demands of exploitation and exploration. On the other hand, compared to specialists, generalists appeared more capable of managing these dual demands and capturing the performance benefits of having both repeat and new partners. As discussed previously, this difference could be embedded in internal organization routines. To survive in a broad market, generalists constantly search for effective ways of utilizing resources, integrating knowledge, and deriving synergies across different activities. This enables generalists to cross-fertilize new and repeat partnership experiences and to gain the performance benefits from structure-based alliances.

This study contributes both empirically and theoretically to the organization ambidexterity literature. Empirically, it provides a large-scale, empirical examination of the structure-based alliance ambidexterity hypothesis in the context of the contemporary American film industry. The results confirm March's (1991) ambidexterity balancing hypothesis in the context of structure-based alliances in which a balance of new and repeat partners is associated with higher performance. This finding adds to the limited understanding of whether structure-based alliance ambidexterity is positively related to firm performance. Theoretically, the study provides a more nuanced framing of the ambidexterity hypothesis at the inter-organizational level. Based on integration of insights from the alliance and organization ecology literatures, it was proposed that organization form moderates the effect of the ambidexterity hypothesis. The results provided preliminary support for this interpretation.

Organizational ambidexterity began as a theory applied to unitary firms (Duncan, 1976) and subsequently grew to encompass a multi-firm perspective (Lavie & Rosenkopf, 2006). The findings here showing an association between firm performance and inter-organizational relationships demonstrated the importance of that theoretical growth, which took into account relations among firms. In addition, the results drew a connection between internal modes of organizing embedded in different organizational forms and a firm's ability to engage in exploitation and exploration concurrently in structure-based alliances: generalists benefit more from balance than specialists do.

Although the findings are correlational and do not permit causal inference, they provided a preliminary base for speculating about their application to practitioners, particularly those involved with multi-organization projects, as in the film industry. Organizations form alliance partnerships to deal with information uncertainty and resource limitations (Baum et al., 2000), which may be reduced by judicious selection of repeat and new partners. Organizations might therefore consider allocating resources to both types of partnerships. Project-based organizations might be encouraged to explore alliance partnerships and actively seek to strengthen relationships with repeat partners while searching for attractive market opportunities with new partners. In

addition, generalist organizations that span multiple product domains might benefit from aggressively pursuing structure-based alliance ambidexterity. The mind-set and organization routines they develop to compete in a broad market have the potential to advantage them in managing duality in partnerships.

Limitations and Future Research

Because the findings are correlational, they raise the possibility of a reversal in the direction of causality implied in the hypotheses. As noted previously, structure-based alliance ambidexterity can be expected to contribute to firm performance. Perhaps firm performance provides organizations with the necessary resources to engage effectively in ambidextrous partnering. Future longitudinal studies are needed to access this possibility and to determine the direction of causality between structure-based alliance ambidexterity and firm performance.

Informed speculation suggests that the performance effects of the ambidextrous hypothesis may depend on the context of competition (Bierly & Daly, 2007; Dittrich & Duysters, 2007; Hotho & Champion, 2010). This study was conducted in a homogenous competitive context, the contemporary motion picture industry, which enabled control for potential variations in competition across different industries. Future multi-industry studies are needed, however, to examine the extent to which the findings generalize to other competitive contexts.

In addition, the present study relied on a specific set of operationalizations for its tests. Alternative measures of variables could make the findings more robust. For example, legitimacy was measured by firm age, but other measures are possible. For example, reputation in the film industry is enhanced by nominations and Oscars from the Academy Awards, and such data could be used as a measure for legitimacy. Although performance was measured on the basis of worldwide box-office receipts, it also could have other bases, such as opening weekend sales. Moreover, the study's hypotheses were tested with respect to a single 5-year period of time. Lengthening the time frame would help in determining the robustness of the findings.

Even with limitations, the present study furthered understanding of a relatively under-researched application of the established tenets of organizational ambidexterity, inter-organizational alliance ambidexterity. The findings could help to spur more theorizing and empirical inquiry on the topic. For example, in addition to the generalist-specialist categorization, future research could investigate other modes of organizing to determine how organizational ambidexterity is related to different forms of alliance ambidexterity. The theoretical extension to organization ecology calls for more integrated efforts across different streams of literature to offer a more expansive, multi-level view of organization ambidexterity. The empirical context of the contemporary motion picture industry helped to reveal the competitive dynamics of the proposed theoretical framework and to provide valuable partnership-selection insights to alliance organizations in general and project-based organizations in particular.

References

- Adler, P. S., & Kwon, S. (2002). Social capital: Prospects for a new concept. *The Academy of Management Review*, 27 (1), 17-40.
- Aldrich, H. E. (1999). *Organizations evolving*. Thousand Oaks, CA: Sage.
- Andrews, K. R. (1971). *The concept of corporate strategy*. Homewood, AL: Irwin.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17, 99-120.
- Barney, J., Wright, M., & Ketchen, D. J. (2001). The resource-based view of the firm: Ten years after 1991. *Journal of Management*, 27, 625–641.
- Baum, J.A.C., Calabrese, T., & Silverman, B.S. (2000). Don't go it alone: Alliance network composition and startups' performance in Canadian biotechnology. *Strategic Management Journal*, 21 (3), 267-294.
- Benner, M. J., & Tushman, M. L. (2003). Exploitation, exploration, and process management: The productivity dilemma revisited. *The Academy of Management Review*, 28 (2), 238-256.
- Bierly, P. E., & Daly, P. S. (2007). Alternative knowledge strategies, competitive environment, and organizational performance in small manufacturing firms. *Entrepreneurship Theory and Practice*, 31(4), 493-516.
- Blau, P. M. (1977). *Inequality and heterogeneity: A primitive theory of social structure*. New York: Free Press.
- Box Office Mojo (2005). *Studio market share*. Retrieved from <http://www.boxofficemojo.com/studio/?view=company&view2=yearly&yr=2005&p=.htm>
- Box Office Mojo (2013). *All time worldwide box office grosses*. Retrieved from <http://www.boxofficemojo.com/alltime/world/?pagenum=1&p=.htm>
- Brown, S. L., & Eisenhardt, K. (1997). The art of continuous change: Linking complexity theory and time-paced evolution in relentlessly shifting organizations. *Administrative Science Quarterly*, 42, 1-34.
- Burns, T., & Stalker, G. M. (1961). *The management of innovation* (2nd ed.). London: Tavistock Publications.
- Burt, R. S. (1992). *Structural holes: The social structure of competition*. Cambridge, MA: Harvard University Press.
- Carroll, G. R. (1985). Concentration and specialization: Dynamics of niche width in populations of organizations. *American Journal of Sociology*, 90 (6), 1262-83.
- Carroll, G. R., & Swaminathan, A. (2000). Why the microbrewery movement? Organizational dynamics of resource partitioning in the U.S. brewing industry. *American Journal of Sociology*, 106 (3), 715-62.
- Carroll, G. R. (1987). *Publish and perish: The organizational ecology of newspaper industries*. Greenwich, CT.: JAI Press.
- Cao, Q., Gedajlovic, E., & Zhang, H. (2009). Unpacking organizational ambidexterity: Dimensions, contingencies and synergistic effects. *Organization Science*, 20, 781-796.
- Chang, B-H., & Ki, E-J. (2005). Devising a practical model for predicting theatrical movie success: Focusing on the experience good property. *Journal of Media Economics*, 18, 247–69.
- Christopherson, S., & Storper, M. (1989). The effects of flexible specialization on

- industrial politics and the labor market: The motion picture industry. *Industrial & Labor Relations Review*, 42 (3), 331-348.
- Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35 (1), 128-152.
- Daniel, F., Lohrke, F. T., Fornaciari, C. J., & Turner Jr., R. A. (2004). Slack resources and firm performance: A meta-analysis. *Journal of Business Research*, 57 (6), 565-574.
- Darr, E., & Kurtzberg, T. (2000). An investigation of partner similarity dimensions on knowledge transfer. *Organizational Behavior and Human Decision Processes*, 82 (1), 28-44.
- Das, T. K., & Teng, B. 2000. A resource-based theory of strategic alliances. *Journal of Management*, 26: 31-61.
- DeFillippi, R. J., & Arthur, M. B. (1998). Paradox in project-based enterprise: The case of film making. *California Management Review*, 40 (2), 125-139.
- Department of Labor. (2010). *Bureau of labor statistics career guide to industries, motion picture and video industries*. Washington, D.C.
- Dinlersoz, E. M., & Glenn MacDonald, G. (2009). The industry life-cycle of the size distribution of firms. *Review of Economic Dynamics*, 12, 648-667.
- Dittrich, K., & Duysters, G. (2007). Networking as a means to strategy change: The case of open innovation in mobile telephony. *Journal of Product Innovation Management*, 24, 510-521.
- Dittrich, K., Duysters, G., & de Man, A-P. (2007). Strategic repositioning by means of alliance networks: The case of IBM. *Research Policy*, 36 (10):1496-1511.
- Dosi, G., Nelson, R. R., & Winter, S. G. (2000). Introduction: The nature and dynamics of organizational capabilities. In G. Dosi, R. R. Nelson, & S. G. Winter (Eds.), *The nature and dynamics of organizational capabilities* (pp. 1-22). Oxford: Oxford University Press.
- Doz, Y. L., & Hamel, G. (1998). *Alliance advantage*. Boston: Harvard Business School Press.
- Duncan, R. (1976). The ambidextrous organization: Designing dual structures for innovation. In R. H. Killman, L. R. Pondy, & D. Sleven (Eds.), *The management of organization* (pp. 167-188). New York: North Holland.
- Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *The Academy of Management Review*, 23 (4), 660-679.
- Eisenhardt, K., & Schoonhoven, C. (1996). Resource-based view of strategic alliance formation: Strategic and social effects in entrepreneurial firms. *Organization Science*, 7, 136-150.
- Fichman, M., & Levinthal, D. (1991). Ties that bind: History dependence in professional relationships. In S. Bacharach, S. Barley, & P. Tolbert (Eds.), *Research in the sociology of organizations* (pp. 119-153). New York: JAI Press.
- Finler, J. W. (2003). *The Hollywood story* (3rd ed.). London and New York: Wallflower Press.
- Freebase (2009). Retrieved from <http://www.freebase.com/>
- Freeman, J., Carroll, G., & Hannan, M. (1983). The liability of newness: Age dependence in organizational death rates. *American Sociological Review*, 48 (5), 692-710.
- Gabbay, S. M., & Leenders, R. Th. A. J. (1999). Corporate social capital: The structure

- of advantage and disadvantage. In R. Th. A. J. Leenders, & S. M. Gabbay (Eds.), *Corporate social capital and liability* (pp. 1-14). Boston: Kluwer.
- Geringer, M. J., Beamish, P. W., & daCosta, R. C. (1989). Diversification strategy and internationalization: Implications for MNE performance. *Strategic Management Journal*, 10, 109-119.
- Gibson, C., & Birkinshaw, J. (2004). Antecedents, consequences, and mediating role of organizational ambidexterity. *Academy of Management Journal*, 47 (2), 209-226.
- Guimerà, R., Uzzi, B., Spiro, J., & Amaral, L. (2005). Team assembly mechanisms determine collaboration network structure and team performance. *Science*, 308, 697-702.
- Gulati, R. (1995). Social structure and alliance formation patterns: A longitudinal analysis. *Administrative Science Quarterly*, 40, 619-652.
- Gulati, R., & Gargiulo, M. (1999). Where do interorganizational networks come from? *The American Journal of Sociology*, 104 (5), 1439-1493.
- Gulati, R., & Kletter, D. (2005). Shrinking core, expanding periphery: The relational architecture of high-performing organizations. *California Management Review*, 47, 77-104.
- Gulati, R., & Singh, H. (1998). The architecture of cooperation: Managing coordination costs and appropriation concerns in strategic alliances. *Administrative Science Quarterly*, 43 (4), 781-814.
- Gupta, A. K., Smith, K. G., & Shalley, C. (2006). The interplay between exploration and exploitation. *Academy of Management Journal*, 49, 693-706.
- Hager, M. A., Galaskiewicz, J., & Larson, J. A. (2004) Embeddedness and the liability of newness among nonprofit organizations. *Public Management Review*, 6 (2), 159-188.
- Hall, P. (2009). *The history of independent cinema*. Albany, GA: Bear Manor Media.
- Hamel, G., Doz, Y. L., & Prahalad, C. K. (1989). Collaborate with your competitors - and win. *Harvard Business Review*, 67 (1), 133-139.
- Hannan, M. T., & Carroll, G. R. (1992). *Dynamics of organizational populations: Density, competition, and legitimation*. New York: Oxford University Press.
- Hannan, M. T., & Freeman, J. (1977). The population ecology of organizations. *American Journal of Sociology*, 82 (5), 929-964.
- Hannan, M. T., & Freeman, J. (1984). Structural inertia and organizational change. *American Sociological Review*, 49, 149-164.
- Hannan, M. T., & Freeman, J. (1986). Where do organizational forms come from? *Sociological Forum*, 1 (1), 50-72
- Hannan, M. T., & Freeman, J. (1989). *Organizational ecology*. Cambridge, MA: Harvard University Press.
- He, Z., & Wong, P. (2004). Exploration vs. exploitation: An empirical test of the ambidexterity hypothesis. *Organization Science*, 14 (4), 481-494.
- Hess, A. M., & Rothaermel, F. T. (2011). When are assets complementary? Star scientists, strategic alliances and innovation in the pharmaceutical industry. *Strategic Management Journal*, 32 (8), 895-909.
- Hotho, S., & Champion, K. (2010). "We are always after that balance" – managing innovation as ambidexterity in the new digital media industries. *Journal of Technology, Management and Innovation*, 5 (3), 36-50.

- Jansen, J. J. P., Bosch, F. A. J. Van Den, & Volberda, H. W. (2006). Exploratory innovation, exploitative innovation, and performance: Effects of organizational antecedents and environmental moderators. *Management Science*, 52 (11), 1661-1674.
- Knack, S., & Keefer, P. (1997). Does social capital have an economic payoff? A cross-country investigation. *Quarterly Journal of Economics*, 112 (4), 1251-1288.
- Kogut, B., & Zander, U. (1993). Knowledge of the firm and the evolutionary theory of the multinational enterprise. *Journal of International Business Studies*, 24, 625-645.
- Koza, M. P., & Lewin, A. Y. (1998). The co-evolution of strategic alliances. *Organization Science*, 9, 255-264.
- Lavie, D., & Rosenkopf, L. (2006). Balancing exploration and exploitation in alliance formation. *Academy of Management Journal*, 49, 797-818.
- Lavie, D., Kang, J., & Rosenkopf, L. (2009). The performance effects of balancing exploration and exploitation within and across alliance domains. *Academy of Management Annual Meeting Proceedings* (Chicago), 1-8.
- Levinthal, D. A., & March, J. G. (1993). The myopia of learning. *Strategic Management Journal*, 14, 95-112.
- Lichtenthaler, U. (2009). Absorptive capacity, environmental turbulence, and the complementarity of organizational learning processes. *Academy of Management Journal*, 52, 822-846.
- Lin, N. (1990). Social resources and social mobility: A structural theory of status attainment. In R. L. Breiger (Ed.), *Social Mobility and Social Structure* (pp. 247-171). New York: Cambridge University Press.
- Lin, N. (1999). Building a network theory of social capital. *Connections*, 22 (1), 28 -51.
- Lin, Z., Yang, H., & Demirkan, I. (2007). The performance consequences of ambidexterity in strategic alliance formations: Empirical investigation and computational theorizing. *Management Science*, 53 (10), 1645-1658.
- Litman, B. R. (1983). Predicting success of theatrical movies: An empirical study. *Journal of Popular Culture*, 16, 159-75.
- Maltby, R. (2003). *Hollywood cinema*. Oxford: Blackwell Publishing Co.
- March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2, 71-86.
- March, J. G., & Simon, H. A. (1958). *Organizations*. New York: John Wiley & Sons.
- McDonald, P., & Wasko, J. (Eds.) (2008). *The contemporary Hollywood film industry*. New York: Wiley-Blackwell.
- McPherson, J. M. (2004). A Blau space primer: Prolegomenon to an ecology of affiliation. *Industrial and Corporate Change*, 13 (1), 263-280.
- Merritt, G. (2001). *Celluloid mavericks: A history of American independent film*. New York: Thunder's Mouth Press.
- Mezias, J. M., & Mezias, S. J. (2000). Resource partitioning, the founding of specialist firms, and innovation: The American feature film industry, 1912—1929. *Organization Science*, 11 (3), 306-322.
- Mowery, D. C., Oxley, J. E., & Silverman, B. S. (1996). Strategic alliances and interfirm knowledge transfer. *Strategic Management Journal*, 17(Winter special issue), 77-93.
- MPA. (2005). *U. S. theatrical market: 2005 statistics*. New York: Motion Picture

- Association Worldwide Market Research.
- Narayan, D., & Princhett, L. (1999). Cents and sociability: Household income and social capital in rural Tanzania. *Economic Development and Cultural Change*, 47 (4), 871-897.
- Nickerson, J. A., & Zenger, T. R. (2002). Being efficiently fickle: A dynamic theory of organizational choice. *Organization Science*, 13: 547-566.
- North, D. C. (1990). *Institutions, institutional change and economic performance*. Cambridge, MA: Cambridge University Press.
- Nosella, A., Cantarello, S., & Filippini, R. (2012). The intellectual structure of organizational ambidexterity: A bibliometric investigation into the state of the art. *Strategic Organization*, 10: 450-465.
- Pandya, A. M., & Rao, N. V. (1998). Diversification and firm performance: An empirical evaluation. *Journal of Financial and Strategic Decisions*, 11 (2), 67-81.
- Park, S-H., Chen, R., & Gallagher, S. (2002). Firm resources as moderators of the relationship between market growth and strategic alliances in semiconductor startups. *Academy of Management Journal*, 45 (3), 527-545.
- Provan, K.G., & Sydow, J. (2008). Evaluating interorganizational relations. In S. Copper, M. Ebers, C. Huxham, & P. S. Ring (Eds.), *The Oxford handbook of interorganizational relations* (pp. 691-716). Oxford: Oxford University Press.
- Putnam, R. D. (1993). The prosperous community: Social capital and public life. *American Prospect*, 13, 35-63.
- Qian, G., Khoury, T. A., Peng, M. W., & Qian, Z. (2010). The performance implications of intra- and inter-regional geographic diversification. *Strategic Management Journal*, 31 (9), 1018–1030.
- Raisch, S., & Birkinshaw, J. M. (2008). Organizational ambidexterity: Antecedents, outcomes, and moderators. *Journal of Management*, 34 (3), 375-40.
- Raisch, S., Birkinshaw, J., Probst, G., & Tushman, M. L. (2009). Organizational ambidexterity: Balancing exploitation and exploration for sustained performance. *Organization Science*, 20, 685- 695.
- Reuer, J. J., & Ariño, A. (2007). Strategic alliance contracts: Dimensions and determinants of contractual complexity. *Strategic Management Journal*, 28, 313–330.
- Reuer, J. J., Zollo, M., & Singh, H. (2002). Post-formation dynamics in strategic alliances. *Strategic Management Journal*, 23, 135–151.
- Rothaermel, F. T. (2001). Complementary assets, strategic alliances, and the incumbent's advantage: An empirical study of industry and firm effects in the biopharmaceutical industry. *Research Policy*, 30 (8), 1235 - 1251.
- Rothaermel, F. T., & Deeds, D. L. (2004). Exploration and exploitation alliances in biotechnology: A system of new product development. *Strategic Management Journal*, 25 (3), 201-221.
- Rumelt, R. P. (1982). Diversification strategy and profitability. *Strategic Management Journal*, 3, 359-369.
- Rusco, F. W., & Walls, W. D. (2004). Independent film finance, pre-sale agreements, and the distribution of film earnings. In V. Ginsburgh (Ed.), *The economics of art and culture: Contributions to economic analysis* (pp. 19-32). Amsterdam: Elsevier Science.
- Russo, A., & Vurro, C. (2010). Cross-boundary ambidexterity: Balancing exploration

- and exploitation in the fuel cell industry. *European Management Review*, 7, 30–45.
- Scott, A. J. (2004). *On Hollywood: The place, the industry*. Princeton, N. J.: Princeton University Press.
- Scott, W. R. (1995). *Institutions and Organizations*. Thousand Oaks, CA: Sage Publications.
- Sharda, R., & Delen, D. (2006). Predicting box-office success of motion pictures with neural networks. *Expert Systems with Applications*, 30, 243–254.
- Sidhu, J. S., Commandeur, H. R., & Volberda, H. W. (2007). The multifaceted nature of exploration and exploitation: Value of supply, demand, and spatial search for innovation. *Organization Science*, 18 (1), 20–38.
- Simon, H. A. (1991). Bounded rationality and organizational learning. *Organization Science*, 2, 125–134.
- Stadler, C., Rajwani, T., & Karaba, F. (2013). Solutions to the exploration/exploitation dilemma: Networks as a new level of analysis. *International Journal of Management Reviews*. Abstract retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/ijmr.12015/abstract>
- Standard & Poor's. (2010). *Movie and entertainment industry survey*. New York: Standard & Poor's Equity Research Services.
- Stephan, M. (2002). An analysis of the relationship between product diversification, geographical diversification and technological diversification. Working Paper, University of Hohenheim, Stuttgart.
- Stettner, U., & Lavie, D. (2013). Ambidexterity under scrutiny: Exploration and exploitation via internal organization, alliances, and acquisitions. *Strategic Management Journal*. Abstract retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2328338
- Stinchcombe, A. L. (1965). Social structure and organizations. In J. G. March (Ed.), *Handbook of organizations* (pp. 142–193). Chicago, IL: Rand McNally & Company.
- Stuart, T. E. (2000). Interorganizational alliances and the performance of firms: A study of growth and innovation rates in a high technology industry. *Strategic Management Journal*, 21, 791–811.
- Swaminathan, A. (1995). The proliferation of specialist organizations in the American wine industry: 1941–1990. *Administrative Science Quarterly*, 40, 653–680.
- Tallman, S., & Li, J. (1996). Effects of international diversity and product diversity on the performance of multinational firms. *Academy of Management Journal*, 39, 179–196.
- Teece, D. J. (1986). Profiting from technological innovation: Implications for integration, collaboration, licensing, and public policy. *Research Policy*, 15, 295–305.
- Teece, D. J. (1992). Competition, co-operation, and innovation. *Journal of Economic Behavior and Organization*, 18, 1–25.
- Thompson, J. D. (1967). *Organizations in action*. New York: McGraw-Hill.
- Tiwana, A. (2008). Do bridging ties complement strong ties? An empirical examination of alliance ambidexterity. *Strategic Management Journal*, 29 (3), 251 - 272.
- Tushman, M. L., & O'Reilly, C. A. (1996). Ambidextrous organizations: Managing evolutionary and revolutionary change. *California Management Review*, 38, 8–30.
- Uzzi, B. (1996). The sources and consequences of embeddedness for the economic performance of organizations: The network effect. *American Sociological Review*, 61: 674–698.
- Van Looy, B., Martens, T., & Debackere, K. (2005). Organizing for continuous

innovation: On the sustainability of ambidextrous organizations. *Creativity Innovation Management*, 14, 208–221.

Williamson, O. E. (1975). *Markets and Hierarchies*. New York: Free Press.

Williamson, O. E. (1991). Comparative economic organization: The analysis of discrete structural alternatives. *Administrative Science Quarterly*, 36, 269-296.

Employee Satisfaction: Mediator of Organizational Service Orientation and Employee Retention

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The paper seeks to evaluate the relationship between organizational service orientation, employee satisfaction and employee retention, using cluster and simple random sampling. A sample of 346 teachers was drawn from Kampala District Uganda. The paper reveals that consideration of organizational service orientation and employee retention is crucial for employee retention in public primary schools in Uganda. This was a cross-sectional study that naturally had problems of common method biases. Replication of the study using a longitudinal approach would reduce such biases. The paper emphasizes the need for public primary schools to adapt policies that promote service orientation in order to improve employee satisfaction and retention. The study also takes a cross-sector approach. No wide cross-sector study has appeared before in an investigation of organizational service orientation and employee retention in the education industry in Uganda.

Service industries are characterized by high competition and relatively low switching costs (Colwell et al., 2009). This has mostly been studied in terms of the external customer and not the internal customer (the employee). Such studies include those of Sharma and Patterson (2000); Crosby and Stephens (1987) and Roos et al. (2005). These studies have emphasized that the loss of customers means, the loss of revenue, and therefore service firms must attract new customers on an ongoing basis in order to survive in the long-term. But there is a high cost of customer acquisition

relative to customer retention (Reichheld & Sasser, 2000; Rust, Zahorik, & Keiningham, 1993). The studies emphasized that service firms that can retain customers enjoy a significant competitive advantage over those that cannot retain customers. However, these studies also focused on the external customer which left a gap in relation to how well the internal customer (the employee) can be retained. Accordingly, the focus will be on internal customer retention in the service firm (hereafter, employee retention) in this research.

In Uganda, for example, under the Universal Primary Education (UPE) program, the government was to provide free education for four children in public primary schools for every family. The major aim was to enable individuals to acquire functional literacy, numeracy, and communication skills (Ministry Of Education & Sports, 1999). The action that was taken to provide free education for the four children resulted in the providing of free education to all primary school age children. There were two reasons for this: one was that the government could not ascertain the actual number of children per parent as there was no official documentation to this effect and therefore parents abused this offer, and two, the program turned into a political gimmick by allowing the ruling political party to solicit votes for another term in office. By 2009, student numbers in public primary schools had a composition of 7,185,584 as compared to a little over 2,000,000 in 1997 (Ministry Of Education & Sports Report, 2010). This resulted in a number of problems including a teacher-pupil ratio rising from 1:40 to 1:120 and fewer resources for the delivery of education services. Teachers had not been prepared to handle these numbers. The government had not properly budgeted for teacher motivation in terms of material and monetary resources. Salary remained static and government did not recruit teachers commensurate to the number of pupils enrolled. School teachers' expectations that the more the number of pupils increased, the more their earnings would be, never became a reality. This affected teachers' morale (Ssewanyana & Matovu, 2011). For example, in a study conducted in Iganga district (one of the political districts in Uganda) by the African Network for the Prevention and Protection against Child Abuse and Neglect (ANPPCAN) and the Uganda Chapter with support from Transparency and Accountability Program (TAP), the attrition rate of teachers in public schools had risen to 48.5%. This was a high rate of employee turnover stemming from an inability by the government to retain them.

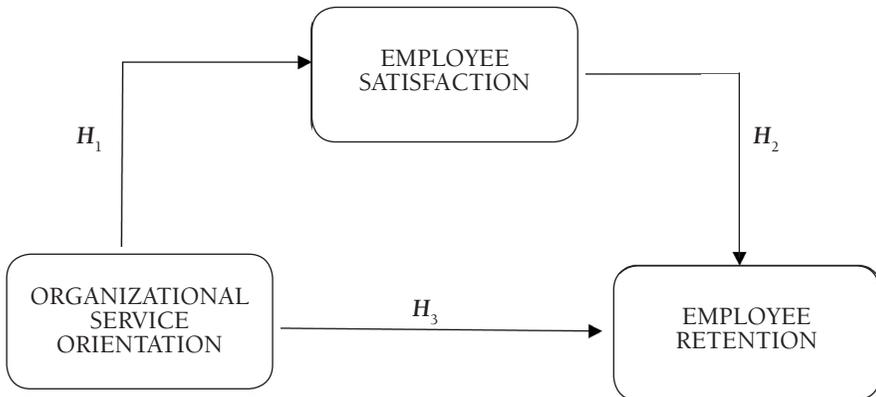
Past studies have identified several drivers of employee retention, such as employment relationship (Turney & Feldman, 2004), personal attributes fit with the job (Cable & Judge, 1996) satisfaction and commitment (Werbel & Gilliland, 1999). Cable & Judge (1996) goes on to assert that managing customer retention is built on relationships but that systems strategies and structures may reflect transactional change.

According to the review of the literature, two possible explanations exist for the positive effect of service organizations on employee retention; that is, the organization can foster employee retention by ensuring that the employee is satisfied and by putting in place organizational service orientation practices. Thus, from a theoretical perspective, the research seeks to advance the study of the role of the organization in employee retention in two respects: by providing empirical tests of both the distinct process explanations that link organizational service orientations to employee retention and the mediating role of employee satisfaction on this relationship. Furthermore,

from a managerial perspective, management attention will be directed to building an organizational environment that supports the attainment of employee satisfaction with an overall view of enhancing high levels of employee retention.

In the next section, the conceptual framework (see Figure 1) will be developed in terms of both the theoretical background that informs it and the specific hypotheses that it entails, using the education sector (teaching service) as the research context. Subsequently, the methods used to test this framework will be discussed, and the results of the empirical tests presented. The paper will end with a discussion of the theoretical, managerial, and future research implications that arise from the research, along with an assessment of the research limitations.

Figure 1: Conceptual Model



Organizational Service Orientation and Employee Satisfaction

Organizational service orientation describes staff attitudes and behaviors, which directly affect the quality of service delivery process in a service organization and determine the state of all interactions between an organization and its customers (Lytle, Hom, & Mokwa, 1998). This concept is not widely known among practitioners. Lytle et al. (1998) described organizational service orientation as an organization-wide embracement of a basic set of relatively enduring organizational policies, practices and procedures intended to support and reward service-giving behaviors that create and deliver service excellence. These practices, policies and procedures indicated a process that took place in order to achieve minimal employee attrition.

The process theory as explained by Van de Ven and Poole (1995) referred to process as the progression (i.e., the order and sequence) of events in an organizational entity's existence over time. The duo argued that change is one type of event. It is an empirical observation of difference in form, quality, or state over time in an organizational entity. The *entity* may be an individual's job, a work group, an organizational strategy, a program, a product, or the overall organization (Van de Ven & Poole, 1995). Attempts to introduce organizational service orientation created a change process designed to achieve a certain end state, in this case, reduced employee attrition better known as employee retention.

Harre and Madden (1975) and Tsoukas (1989) referred to process theory as an explanation of how and why an organizational entity changes and develops. This explanation identified the generative mechanisms that cause observed events to happen and the particular circumstances or contingencies behind these causal mechanisms. Observed events like high employee retention rates result from a process that derive from specific mechanisms designed by organizations. Organizations fronting service orientation will generate employee satisfaction which in turn will result in employee retention.

This argument derives its strengths from the process theory which according to Van de Ven and Poole (1995), explained a causal relationship between independent and dependent variables in a variance theory. Secondly, the process theory is a category of concepts of organizational actions (e.g., rates of communications, work flows, decision-making techniques, or methods for strategy making). These concepts or mechanisms may be at work to explain an organizational result, but they do not describe how these variables or mechanisms unfold or change over time. Actions like introducing appropriate service orientations form part of communication or strategies that in turn result in satisfaction and high retention rates. Such practices actively involve employees and create a gratifying mindset within the employee that enables the employee to feel like working with others and for the organization for a long time.

According to Chia and Holt (2006), from the 'practice turn' in social theory, the involvement with others' lives is a form of relationalism that acknowledges the latent primacy of relations and practices over the individual or organization. Relationalism seeks to explain human actions in terms of a *primitive*, 'mindless' and practical coping. Chia and Holt (2006) stated that, such practical engagements precede mental content, reflection, or any form of symbolic representation. This relational state of absorbed involvement with the world is what a number of writers, including Nietzsche and Heidegger, insisted was a more basic condition of human life (Chia & Holt, 2006).

Given Chia and Holts' (2006) views, it can be argued that service orientation exists when the organizational climate for service crafts, nurtures, and rewards service practices and behaviors that are known to meet customer needs (Lynn, Lytle, & Bobek, 2000). It is also taken as something that manifests itself in the attitudes as well as actions of members of an organization which highly values the creation and delivery of an excellent service (Yoon, Choi, & Park, 2007). According to Lytle and Timmerman (2006) an organizational service orientation consists of ten fundamental elements. Lytle et al. (1998) argued that these elements (dimensions) could be grouped into four service orientation attributes: 1) service leadership practices (SLP) which include servant leadership, service vision. 2) service encounter practices (SEP) which include customer treatment and employee empowerment, 3) service system practices (SSP) which include service failure prevention and recovery, service technology, service standards communication, and 4) human resource management practices (HRMP) which include service training and service rewards.

Brown and Peterson (2003); Deshpande, Farley, and Webster (1993) and Deshpande and Farley (1997) refer to customer service orientation as the tendency by employees to put the customers' interests first. It should be noted that people now live in a service economy. In fact, according to the US Bureau of Labor Statistics, over

80% of American employees were working in service industries in 1999 (Ford, Ford, & D'Amelio, 2008). Research has shown that as they develop a shared history, customers (or clients) and consultants get to know each other and build trust over time.

Newstrom and Davis (2001) defined job satisfaction as an affective attitude – a feeling of relative like or dislike towards something. Attitudes consist of feelings, thoughts and intentions to act. To Newstrom and Davis, job satisfaction was not just optional for an organization, but an important tool and foundation for growth. Attractive compensation and promotion practices provide organizations with an advantage over their competitors by increasing their ability to recruit, hire, and retain employees (e.g., Sinclair et al., 2005). Employees must know what they are doing and why they are doing it in order to be satisfied (Rust et al., 1993). According to Parasuraman, Zeithamal, and Berry (1999), service systems practices were positively and directly related to employee job satisfaction. Standard economic theory postulates that job satisfaction depends positively on income and negatively on hours worked, as well as on a set of other job-specific and worker-specific characteristics (Vila & Garcia-Mora, 2005). Since it is known that employee job satisfaction is not influenced by the same variables in all industries (Hom & Griffeth, 1991), focus will be on the study of organizational service orientation as a predictor of employee satisfaction. Therefore,

Hypothesis 1: Organizational service orientation is positively related to employee satisfaction.

Employee Satisfaction and Employee Retention

Much of today's theory on voluntary turnover stems from the ideas put forth on an employee's intent to leave a job. A meta analysis that was performed on this issue emphatically pointed out that a fundamental way of decreasing employee turnover is to raise the level of job satisfaction. Psychologists stress that when these expectations are not met, the employee's job satisfaction and organizational commitment levels will be lowered and the employee will leave. The relationship of job satisfaction to employee turnover has been heavily researched in recent years and is by far one of the main predictors of turnover (Griffeth, Hom, & Gaertner, 2000). Moncarz and Zhao (2009) found that supervision, promotion process, employee communication, and fringe benefits were positively correlated with job satisfaction and negatively correlated with intent to leave and voluntary turnover. However, job satisfaction alone is a result of factors such as human resource practices within the organization. Existing studies have not been able to find a link between organizational service orientation and employee job satisfaction.

According to Spector (1997), job satisfaction is the extent to which people like or dislike their jobs. Spector suggested that job satisfaction is a general or global affective reaction that individuals hold about their job. Weiss, Dawis, and Lofquist (1967) and Locke (1976) defined job satisfaction as a pleasurable emotional state resulting from the appraisal of one's job. This definition suggested that people form attitudes towards their jobs by taking into account feelings, beliefs, and behavior. Job satisfaction has been labeled as a central variable in both research and theory of organizational behavior (Spector, 1997). Put simply, it refers to the extent to which people like (satisfaction) or dislike

(dissatisfaction) their jobs. Literally thousands of job satisfaction studies can be found in journals of organizational behavior, human resources, and related fields (Zeffane, 1994).

Employee perceptions of how they are treated by the organization are positively associated with organization citizenship behavior which, in this case, would be reflected in their reduced attrition levels. It is therefore argued that the above is also true for internal customers. These behaviors result in more effective service delivery to the organizational standards and thus enhance customer perceptions (in this case, internal customers) of service quality which in itself retains (internal) customers (Carol, 2003). This study intends to address the paucity of empirical research on employee satisfaction and internal customer retention, therefore,

Hypothesis 2: Employee satisfaction is positively related to employee retention.

Organizational Service Orientation and Employee Retention

One of the most prevalent challenges, Carol (2003) asserted, is how to motivate service employees to perform their roles so that the service actually delivered by the employees meets the service demands defined by the organization so as to gain customer retention. Empirical evidence suggested that the establishment of well-defined organizational goals and objectives influence employee retention and job productivity. Kim (2009), in his study on corporate orientation, found that organizational direction and support had a significant impact on employee job satisfaction and overall commitment. Findings from Susskind, McKearnen, and Thomas-Lamar's (1999) research also suggested that perceived organizational support strongly influenced job satisfaction and employees' commitment to their organizations. A study by the US Department of Labor in 1993 on high performance work practices revealed that involving employees in decision-making, goals, and the direction of an organization through participation in teams would help produce job satisfaction and reduce turnover. Several scholars found that other work practices, such as total quality management, resulted in productivity gains and had a positive impact on motivation and commitment to the organization (Cotton & Tuttle, 1986; Huselid, 1995; Pfeffer, 1982). Huselid (1995) reported that organizations that incorporated such high-performance work practices were more likely to experience lower turnover rates for non-managerial employees. However, no studies have linked organizational service orientation to employee job satisfaction and eventual employee retention. Thus,

Hypothesis 3: Organizational service orientation positively influences employee retention.

Employee satisfaction is defined as a pleasurable emotional state resulting from the appraisal of one's job (Weiss et al., 1967; Locke, 1976). The positive relationship between employee satisfaction and employee retention has been demonstrated time and again and summarized in narrative reviews (Griffeth et al., 2000; Cotton & Tuttle, 1986). Hence, there is abundant support for viewing it as an influence on retention.

Parasuraman et al. (1999), has long argued that service systems practices were positively and directly related to employee job satisfaction. Employee job satisfaction

can depend on a set of job-specific characteristics. Such specific characteristics were part of a process which in essence explained how and why an organizational entity would change and develop. Such changes were embedded in employees allowing them to know what they were doing and why they were doing it (service orientation) in order to be satisfied (Rust et al., 1993). Parasuraman et al. (1999) insisted that service systems practices would be positively and directly related to employee job satisfaction.

One naturally would expect that organizational service orientation would correlate positively with employee retention for reasons other than their satisfaction expectations (e.g., because service orientation influences both). For example, Chao (1997) reported that organizations which incorporated such high-performance work practices (like service orientation) were more likely to experience lower turnover rates for non-managerial employees. Consequently as depicted in Figure 1, it can be hypothesized that:

Hypothesis 4: Employee satisfaction mediates the relationship between organizational service orientation and employee retention.

Methodology

This study utilized 216 responses from a sample of 346 teachers generated using Yamane's (1973) sample selection approach from a population of 3,476 teachers in Kampala District Uganda based on the Ministry of Public Service Payroll 2012. In an attempt to measure the opinions or attitude of respondents (Burns & Grove, 2009), a four point Likert scale-type questionnaire was used to obtain self-reported information on organizational service orientation, employee satisfaction, and customer retention. The background formed the first section of the questionnaire. It contained four questions about the respondents' gender, age, education level, and time spent in the organization.

The findings showed that of the respondents: 50.9% were male and 49.1% were female. In terms of age: 16.7% were below 25 years of age, 56% were between 25 and 35 years of age, 21.3% were aged 35 to 45 years old, 5.6% were between the ages of 45 and 55 and 0.5% were above the age of 55. In terms of education level and training, 8.8% were licensed teachers, 53.7% certificate holders, 31% diploma holders, 5.6% degree holders and 0.5% postgraduate teachers. For time spent in that organization, 20.4% had spent between 0 and 1 year, 49.5% between 1 and 5 years, 22.2% between 5 to 10 years, 6.5% between 10 to 15 years and 0.5% above 15 years.

The second section – organizational service orientation – consisted of 10 items. The item scales for organizational service orientation were developed consistent with the Serv*Or tool (Lytle et al., 1998). For example, each respondent was asked to indicate his/her opinions on the items provided on the questionnaire (e.g., “My organization has avenues to prevent service failure”). Employee satisfaction consisted of 11 items. The item scales were measured consistent with a the Minnesota Satisfaction Questionnaire (MSQ) (Weiss et al., 1967) with modifications to suit this study. The respondents were asked to report their responses on items such as “I am satisfied with the competencies of my supervisor in making decisions”. Employee retention was measured using a 12 item scale developed from Ramlall (2003) and Bhatnagar (2007). For instance, a respondent

was asked to opine on statements like, “My organization has a documented process for handling employee complaints”.

Principal component analysis was then performed to identify patterns in data in order to reduce it to a manageable level, achieve parsimony and hence explained the maximum amount of common variance using the smallest number of explanatory constructs (Field, 2009). The resulting components for organizational service orientation were interpreted as service systems practices and human resource practices. In total, 9 questions from the original 10 explained 51.369% of the variance in organizational service orientation. The resulting components for employee satisfaction were interpreted as foresightedness and planning. In total, 7 questions from the original 11 explained 62.562% of the variance in organizational service orientation. The resulting components for employee retention were interpreted as supervision related experiences and empowerment. In total, 11 questions from the original 12 explained 55.573% of the variance in employee retention.

Statistical Modeling

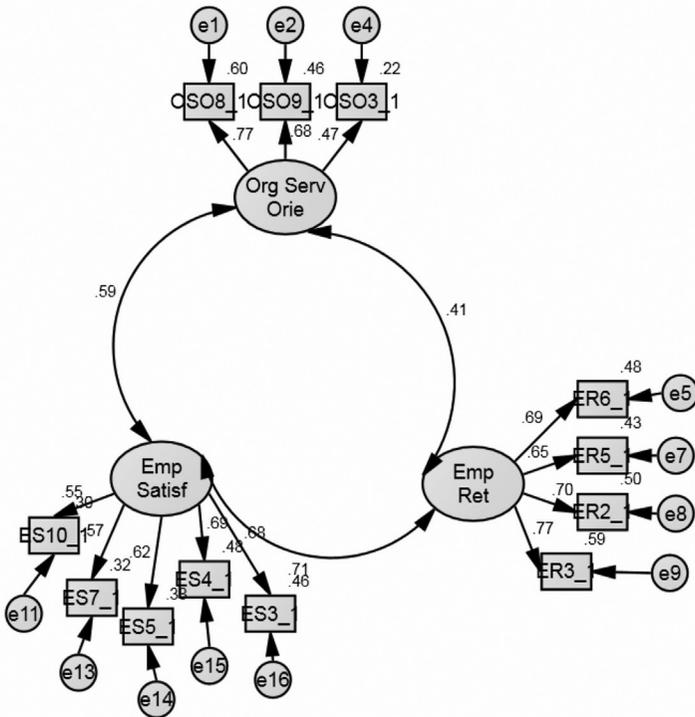
To estimate the model of the relationships between organizational service orientation, employee satisfaction and employee retention in line with the objectives, Structural Equation Modeling (SEM) was employed. SEM addressed the issue of measurement error, and simultaneously estimated a system of structural equations. SEM is a comprehensive statistical approach used to test hypotheses about relations among observed and latent variables (Hoyle, 1995). According to Rigdon (1998), it was also a methodology for representing, estimating and testing a theoretical network of (mostly) linear relations between variables, and according to MacCallum and Austin (2000), tested hypothesized patterns of directional and non-directional relationships among a set of observed (measured) and unobserved (latent) variables.

SEM therefore helped in understanding the patterns of correlational/covariance among a set of variables and according to Kline (2011), explained as much variance as possible with the model specified. A two-step process as guided by Anderson and Gerbing (1988) was used: estimate the measurement model first and then the structural model. The estimation procedure in AMOS 18 (Arbuckle, 2009) was used to construct the use of the measurement model in order to construct the structural model. Indeed it showed model fit as indicated in Figure 5. The overall fit of the models was tested using the following fit criteria: the Chi-square test (which was an absolute test of model fit required that the model was rejected if the p-value was <0.05), Root Mean Square Error of Approximation (RMSEA) which should have been <0.08 , and the Tucker-Lewis index (TLI) for values of 0.95 or higher (Hu & Bentler, 1999).

Descriptive statistics and variable correlations are presented in Table 1. Table 2 presents a summary of the fit indices for the CFA model that was tested. Using the covariance matrix, a three factor CFA model was estimated. In effect, this model amounted to testing the discriminant validity of three variables: organizational service orientation, employee satisfaction, and employee retention. Convergent validity was performed using the Bentler-Bonett Normed Fit Index (NFI), a measurement model which showed strong convergent validity with a NFI value above 0.90 (Mark & Sockel, 2001). For the model (Figure 2 above), the NFI was 0.989, indicating strong convergent validity. A summary of

other fit indices showed model fit as shown in Table 1 below. Collectively, these results indicated that the measurement properties fit quite well and that there was sufficient covariance among the latent variables to warrant examining the different intervening effects (Tabachnick, & Fidell, 2001).

Figure 2: Measurement Model for OSO, ES, and ER



CMIN=64.045; DF=51; P=0.432; RMR=0.011
 GFI=0.993; AGFI=0.973; NFI=0.989; TLI=0.976
 CFI=0.982; RMSEA=0.034

Org Serv Ori= Organizational Service Orientation
 Emp Satisf=Employee Satisfaction
 Emp Ret=Employee Retention

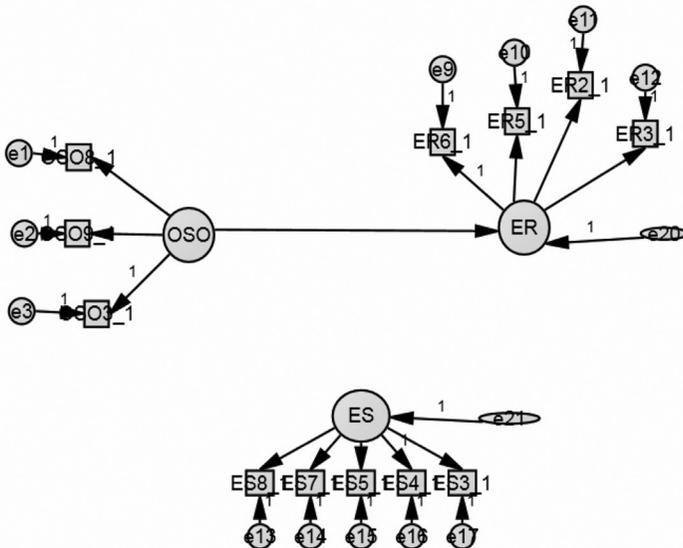
Table 1: Summary of Fit Indices for Measurement Model

Variable	X ²	df	X ² /df	p	NFI	GFI	AGFI	TLI	RMSEA
Cutoff point			≤0.5	≥0.00	≥0.90	≥0.95	≥0.90	≥0.95	≤0.08
CFA	64.045	51	1.256	0.104	0.989	0.983	0.973	0.976	0.034

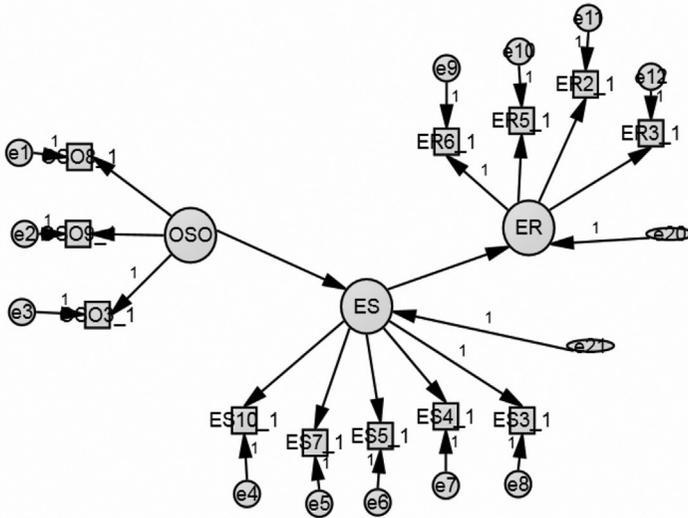
It should also be highlighted that the fit of the three factor CFA was equivalent to a ‘saturated structural model’ — or one that included direct paths from all antecedents to both the mediator (i.e. employee satisfaction) and to the criterion (i.e. employee retention). This saturated model provided a useful comparison against which to gauge the fit of other models.

Based on the revelations above, two competing structural equation models can be constructed. This was so because the major objective of the study was to establish the mediating effect of employee satisfaction on the relationship between organizational service orientation and employee retention. The position of this study in developing the hypotheses had been that employee satisfaction would mediate the relationship between organizational service orientation and employee retention. The point was to establish whether the intervening variable affected the relationship between organizational service orientation and employee retention. Therefore, it had to be compared with a model that tested for no mediation (see Figures 3 and 4).

Figure 3: Direct Effects Model



CMIN=174.819; DF=53; P=0.000; CMIN/DF=3.298 RMR=0.112;
 GFI=0.895; AGFI=0.846; NFI=0.772; TLI=0.783; CFI=0.826; RMSEA=0.103
 OSO= Organizational Service Orientation
 ES=Employee Satisfaction
 ER=Employee Retention

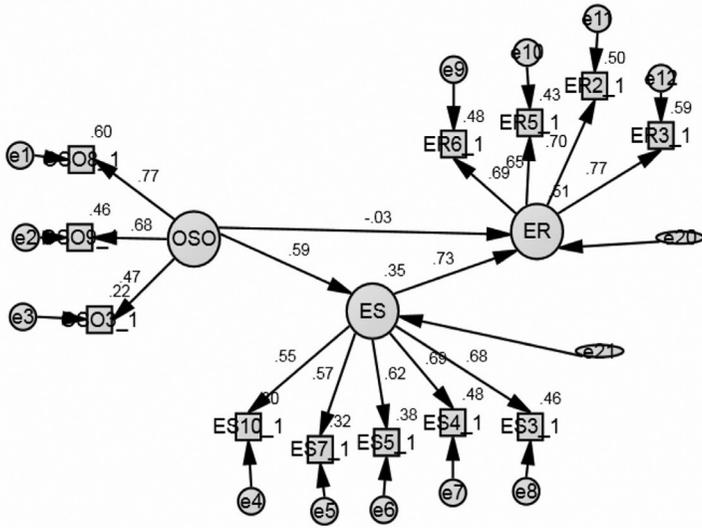
Figure 4: *No Direct Effects Model*

CMIN=64.105; DF=52; P=0.121; CMIN/DF=1.233;
 RMR=0.026; GFI=0.954; AGFI=0.931; NFI=0.917;
 TLI=0.978; CFI=0.983; RMSEA=0.033

OSO= Organizational Service Orientation
 ES=Employee Satisfaction
 ER=Employee Retention

Mediation is the hypothesized causal chain in which one variable affects a second variable that in turn affects a third variable. According to Baron and Kenny (1986), the procedure for testing for mediation is a 4-step procedure: 1) establish the relationship between the predictor and the criterion variable and this relationship must be significant, 2) establish the relationship between the predictor and the mediator variables which has to be significant, 3) establish the relationship between the mediator and the criterion variable which has to be significant, and 4) when paths 2 and 3 are controlled, a previously significant relationship between the independent and dependent variables is no longer significant; which translates into full mediation. In step 4, some form of mediation is supported if the effect of the mediator remains significant after controlling for the predictor variable. If the predictor is still significant (i.e., both the predictor and mediator significantly predict the criterion variable), the finding supports partial mediation. From a conceptual perspective, the most common application of mediation is to 'explain' why a relationship between two constructs exists. To understand how mediating effects are shown in SEM model, a model in terms of direct and indirect effects was examined.

Model 5: SEM-Mediated Model



CMIN=64.105; DF=52; P=0.121; RMR=0.011
 GFI=0.994; AGFI=0.9331; NFI=0.917; TLI=0.978
 CFI=0.983; RMSEA=0.033
 OSO= Organizational Service Orientation
 ES=Employee Satisfaction
 ER=Employee Retention

It has been recommended that SEM be considered for assessing mediation because it offers a reasonable way to control for measurement error as well as some interesting alternative ways to explore the mediation effect (Baron & Kenny, 1986; Fornell & Larcker, 1981; Holmbeck 1997; Judd & Kenny 1981; Kline, 1998, 2011). Models involving latent variables with multiple measured indicators are inherently corrected for measurement error by estimating a common and unique variance separately. This, in turn, increases the likelihood that indirect effects, if present, will be discovered. More complicated mediation models, such as those with several mediators linked serially or operating in parallel (or both), can be explored in the context of SEM with any combination of latent or measured variables. The normal theory approach developed by Sobel (1982) has been incorporated in popular SEM software applications (Jöreskog & Sörbom, 2005) and EQS (Bentler, 1997), and it is discussed in the context of SEM by Bollen (1987). A bootstrapping approach to assessing indirect effects is implemented in the current version of AMOS (Arbuckle & Wothke, 1999; Arbuckle, 2009).

Thus, in order to test for mediation, three structural equation models using AMOS 18 were used in this study (Hair et al., 2006). The first structural model (Figure 3) was the theoretical model that posited that employee satisfaction did not mediate the relationship between organizational service orientation and employee retention (direct effect). The second structural model (Figure 4) depicted a situation of indirect effect of organizational service orientation on employee retention through employee satisfaction. The third structural model (Figure 5) brought out a mediation effect.

In effect, the direct and indirect effects were isolated for the exogenous variable (Figures 3 and 4). However, the study first fit ‘only directs’ and ‘no directs’ models to serve as additional bases of comparison. The only direct model estimated direct relationships from the exogenous variable to employee retention, with no paths leading to or stemming from employee satisfaction or the mediator (although employee satisfaction remains as a latent variable in the model). This model exhibited deficient fit indices (see Table 2) and differed significantly from the CFA model. This indicated that the exogenous variable had a significant direct effect with employee satisfaction, or that employee satisfaction related significantly with employee retention. In other words, these results attested to the importance of the mediator variable. In the context of this model, organizational service orientation ($r=0.403$, $p<0.001$) related significantly to employee retention. These findings were consistent with the anticipated forms of intervening effects.

Table 2: Comparison of Competing Models

			“Directs Model”	“No directs Model”	Mediated model
ES	<---	OSO		0.590***	.595***
ER	<---	ES		0.710***	.728***
ER	<---	OSO	0.403***		-.026
CMIN			174.891	64.105	64.045
DF	<---		53	52	51
P	<---		0.000	0.121	0.104
CMIN/DF	<---		3.298	1.233	1.256
RMR	<---		0.112	0.026	0.026
GFI	<---		0.895	0.954	0.954
AGFI	<---		0.846	0.931	0.930
NFI	<---		0.772	0.917	0.917
TLI	<---		0.783	0.978	0.976
CFI	<---		0.826	0.983	0.982
RMSEA	<---		0.103	0.033	0.034
PCLOSE	<---		0.000	0.863	0.839
SMC-OSO_8			0.569	0.600	0.599
SMC-OSO_9			0.519	0.405	0.464
SMC-OSO_3			0.197	0.221	0.222
SMC-ES			0.000	0.348	0.354
SMC-ER			0.163	0.504	0.508

The no direct effects model estimated paths from the exogenous variable to employee satisfaction (Figure 4), and from employee satisfaction to employee retention, but contained no direct effects from the exogenous variable to employee retention. This model exhibited acceptable fit indices (see Table 2). In the context of this model, the exogenous variable related significantly with employee satisfaction and employee satisfaction related significantly with employee retention. Therefore, a mediating relationship was evident for the intervening effects.

Morgan and Hunt (1994) examined four different criteria in a SEM model comparison: (1) overall model fit as measured by CFI, (2) percentage of hypothesized significant paths, (3) amount of variance explained as measured by squared multiple correlations, and (4) parsimony assessed by the Normed Fit Index (NFI). Comparison of results between the directs only, no directs, and mediated models on these four criteria indicated that although both the no directs and the mediated models had generally similar CFI and NFI fit indices (Table 2), the mediated model's squared multiple correlation (SMC) were a better representation of the data than the no directs model's SMC.

Results

This paper set out to establish whether organizational service orientation was related to employee satisfaction. In SEM, when a variable loads on only a single common factor, the Standardized Regression Weights (standard paths coefficients) can be interpreted as the correlation between the observed variable and that factor. SEM theory assumes that in a relationship between two variables being tested, the Critical Ratio (C.R.) statistic can be based on a probability level of 0.05. This test statistic needs to be $> \pm 1.96$ before the hypothesis can be rejected (Hair et al., 2006). This implies a significant correlation (Hair et al., 2006). The opposite is true when, for example, the C.R. is $< \pm 1.96$, then the correlation is non-significant. The output in Table 2 was used to establish whether the hypotheses were supported or not. Correlation results in Table 2 showed that organizational service orientation was positively correlated to employee satisfaction ($\beta=0.595$; C.R. > 1.96) meaning that when organizational service orientation values went up by 1 standard deviation (SD), it created a 0.595 increase SD in employee satisfaction, thus strengthening support for Hypothesis 1. The effects of the exogenous variables onto the endogenous variables that were established can be seen in Table 3.

Table 3: Standardized Effects

	Total effects			Direct effects			Indirect effects		
	<i>OSO</i>	<i>ES</i>	<i>ER</i>	<i>OSO</i>	<i>ES</i>	<i>ER</i>	<i>OSO</i>	<i>ES</i>	<i>ER</i>
<i>ES</i>	.595	.000	.000	.595	.000	.000	.000	.000	.000
<i>ER</i>	.407	.728	.000	-.026	.728	.000	.433	.000	.000

Table 3 above showed that organizational service orientation explained 59.5% of the variance in employee satisfaction. Of this total effect, all 59.5% was direct effect. This finding was in support of Hypothesis 1 which stated that organizational service orientation was significantly related to employee satisfaction.

Following the results in Table 3, employee satisfaction was found to explain 72.8% of the variance in employee retention. Of this total effect, all 72.8% was direct effect. This finding supported Hypothesis 2 which stated that employee satisfaction was significantly related to employee retention. The correlation results as observed in terms of standard paths coefficients in Table 2, established a significant and positive association between the two variables ($\beta=0.728$; $C.R.> 1.96$), which implied that when employee satisfaction went up by 1 SD, employee retention went up by 0.728 SDs.

In Table 2, it can be seen that the correlation results indicated an association between organizational service orientation and employee retention ($\beta=0.403$; $C.R.> 1.96$), which implied that a change of 1 SD in organizational service orientation created a change of 0.403 SD in employee retention. This finding lent support to Hypothesis 3 which stated that there was a significant relationship between organizational service orientation and employee retention.

The study hypothesized that the influence of organizational service orientation on employee retention would be mediated by employee satisfaction. Accordingly, using the no direct model again as a base, an 'organizational service orientation direct' model was fit by adding a path from organizational service orientation to employee retention (Figure 5). This model exhibited excellent fit indices (see mediated model results in Table 2) which was a significant improvement over the direct model, and did not differ significantly from the saturated model (Table 1) and the no direct model (Table 2).

However, as illustrated in Table 2, the correlation between organizational service orientation and employee retention was significant ($r=0.403$; $p=0.001$). But when a third variable (employee satisfaction) was introduced in this relationship, the correlation between the two (exogenous and criterion variables) became insignificant ($r=0.026$, $p>0.05$). Thus, the direct effect of organizational service orientation was not significant, but the indirect effect was significant (Table 2).

The results of the models above indicated that organizational service orientation had a direct effect on the employee satisfaction mediator, employee satisfaction had a significant relationship with employee retention, and that the direct effect of organizational service orientation to employee retention was no longer significant. Given the earlier significant total effect (0.403), and the new insignificant total effects (-0.026), these results were consistent with the hypothesis of a mediation effect, and in this case, full mediation. This therefore supported Hypothesis 4 which stated that a mediation effect existed in employee satisfaction on the relationship between organizational service orientation and employee retention.

Discussion, Conclusions, and Recommendations

This study sought to demonstrate the necessity for heads of schools in the private sector to pay attention to organizational service orientation and employee satisfaction in order to achieve a high employee retention rate. In keeping with the aim and

contributions of this study, the process of continuous refinement of the perspectives that attempt to explain employee retention in schools will continue to undergo changes based on the empirical evidence. From this study, it was evident that the more the organization institutes appropriate organizational service orientations, the better the employee satisfaction level and the retention of its employees.

The study derived four hypotheses from the reviewed literature and tested all of them. Hypothesis 1 stated that organizational service orientation was positively correlated with employee satisfaction. This was tested and confirmed. In support of the findings, Lynn et al., (2000), Baydoun, Rose, and Emperado (2001), and Lytle and Timmerman (2006), argued that service orientation existed when the organizational climate for service crafts, nurtures, and rewards service practices and behaviors were known to meet customer needs. The factored indicators of organizational service orientation were service systems practices and human resource practices. This implied that schools should endeavor to institute systems and practices that promote employee satisfaction on the job.

Hypothesis 2 stated that employee satisfaction was positively related to employee retention. The results concurred with the hypothesis and confirmed that when employees are satisfied on the job, they exhibit high levels of retention, and the rate of turnover decreases. These findings are in line with those of Kinzli et al. (2004) who in a meta analysis on factors that affect employee retention emphatically pointed out that a fundamental way of decreasing employee turnover was to raise the level of job satisfaction. Therefore, the heads of schools need to provide avenues for employee satisfaction if they are to maintain low levels of employee turnover.

Hypothesis 3 stated that organizational service orientation positively influenced employee retention. The finding was in support of earlier findings (Homburg, Hoyer, & Fassnacht, 2002; Lynn et al., 2000) that postulated that there was a significant relationship between organizational service orientation attributes and the majority of service performance variables of which customer retention was one. Based on the findings, managerial practices in schools should emphasize avenues to prevent service failure and promote rewards for good performance. This will help maintain high retention rates among employees (Moncarz & Zhao, 2009) and in this case, in schools.

The study also established a mediation effect (Hypothesis 4) in which employee satisfaction mediated the relationship between organizational service orientation and employee retention. The mediation effect of employee satisfaction on the relationship between organizational service orientation and employee retention was explained by the fact that the total effect (40.7%) of organizational service orientation on employee retention was different from the direct effect (-2.6%). This implied that organizational service orientation's account of 43.3% of the variance in employee retention was indirect, meaning there was a mediation effect and that Hypothesis 4 was supported. When employee satisfaction was introduced, the effect (-2.7%) completely diminished, which implied that there was full mediation of employee satisfaction on the relationship between organizational service orientation and employee retention. The fact that the critical ratio index was less than 1.96 and the effect of organizational service orientation on employee retention was reduced to a non-significant level when employee satisfaction was introduced in the model, implied that there was full rather than partial

type of mediation between organizational service orientation, employee satisfaction, and employee retention (Jose, 2008; Baron & Kenny, 1986). In their endeavors to retain their employees on the job for a long time, school heads and proprietors need not emphasize organizational service orientation in isolation of employee satisfaction, but to ensure both factors exist within the organizational practices.

Limitations and Future Research

This was a cross-sectional survey using a quantitative approach. This by and large precluded cause-effect relationships being uncovered. It is advisable that the diversity between service sectors be investigated. Wide cross-sector studies are rarely practiced in the quality management field, and in this study, it was a challenge.

This was an empirically driven study. The validity of the findings depended very much on whether the sample was representative. This unfortunately may not have been the case since the schools that were studied were located within the capital and its suburbs, yet Uganda has over 111 districts at the moment, mostly in the rural areas. It is fair to say that teachers in remote areas depend on different attributes of service orientation in order to remain or gain satisfaction at work given the rural setting of their environment. This study mostly relied on a quantitative approach, which in turn, resulted in a failure to gather salient issues from the respondents. It is therefore imperative that methodological triangulation approaches (Kozlowski & Klein, 2000) be used (i.e., blending both qualitative and quantitative approaches) in order to enrich the results. The study could also be improved by exploring the mediating effect of employee satisfaction on the relationship between organizational service orientation and employee retention.

References

- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological bulletin*, 103(3), 411.
- Arbuckle, J. L., & Wothke, W. (1999). *AMOS 4.0 user's guide*. Chicago: SPSS.
- Arbuckle, J.L. (2009). *Amos 18.0 User's Guide*. Crawfordville, FL: Amos Development Corporation.
- Baydoun, R., Rose, D., & Emperado, T. (2001). Measuring customer service orientation: An examination of the validity of the customer service profile. *Journal of Business and Psychology*, 15(4), 602-605.
- Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-82.
- Bentler, P. M. (1997). *EQS for Windows (Version 5.6)* [Computer software]. Encino, CA: Multivariate Software.
- Bhatnagar, J. (2007). Talent management strategy of employee engagement in Indian ITES employees: Key to retention. *Employee Relations*, 29(6), 640-63.
- Bollen, K. A. (1987). Total, direct, and indirect effects in structural equation models. In C. C. Clogg (Ed.), *Sociological methodology 1987* (pp. 37-69). Washington, DC:

- American Sociological Association.
- Brown S., & Peterson R.. (2003). Antecedents and consequences of a sales person job *Business Review Sept/Oct*.
- Burns, N., & Grove, S.K. (2009). *The practice of nursing research: Appraisal, synthesis, and generation of evidence* (6th ed.). St. Louis, MO: Saunders Elsevier.
- Cable, D.M., & Judge, T. (1996). Person – organization fit, job choice decisions, and organizational entry. *Organizational behavior and human decision processes*, 67(3), 294 – 311.
- Carol, C. (2003). Organizational citizenship behaviour and service marketing; Consumers' perceptions of service quality. *Journal of Retailing*, 64.
- Chao, G. T. (1997). Unstructured training and development: The role of organizational socialization. In J. K. Ford (Ed.), *Improving training effectiveness in work organizations* (pp.1-17). Mahwah: Erlbaum.
- Chia, R., & Mackay, B. (2007). Post-processual challenges for emerging strategy-as-practice perspective: Discovering the strategy in logic of practice. *Human relations*, 60(1), 217-242.
- Colwell, S., Horgarth-Scott S., Jiang, D., & Josh, A. (2009). Effects of organizational and serviceperson orientation on customer loyalty. *Journal of Management Decision*, 47(10), 1489-1513.
- Cotton L. J., & Tuttle, M. J. (1986). Employee turnover: A meta-analysis and review with implications for research. *Academy of Management Review*, 11, 55-70.
- Crosby, L. A., & Stevens, N. (1987). Effects of relationship marketing on satisfaction, retention and prices. *Journal of Marketing Research*, 24, 404-411.
- Deshpande, R., & Farley J.U. (1997). Measuring market orientation: Generalization and synthesis. *Journal of Market-Focused Management*, 2(3).
- Deshpande, R., Farley, J.U., & Webster, F. E. Jr. (1993). Corporate culture, customer orientation, and innovativeness in Japanese firms: A quadrad analysis. *Journal of Marketing*, 57(1), 23–37.
- Field, A. (2009). *Discovering Statistics Using SPSS*. London: Sage.
- Ford, J. D., Ford, L. W., & D'Amelio, A. (2008). Resistance to change: The rest of the story. *Academy of Management Review*, 33(2), 362–377.
- Fornell, C., & Larcker, D.F (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18, 39-50.
- Griffeth, R. W., Hom, W. P., & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium. *Journal of Management*, 26, 463-488.
- Hair, F, Anderson, R., Tatham, R., & Black, W. (2006). *Multivariate Data Analysis with Readings* (5th ed.). Englewood Cliffs, NJ: Prentice Hall.
- Harre, R., & Madden, E. A. (1975). *Causal powers*. Totowa, NJ: Littlefield, Adams.
- Holmbeck, G. N. (1997). Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: Examples from the child-clinical and pediatric psychology literatures. *Journal of Consulting & Clinical Psychology*, 65, 599-610.
- Hom, P. W., & Griffeth, R. W. (1991). Structural equations modeling test of a turnover theory: Cross-sectional and longitudinal analyses. *Journal of Applied Psychology*, 6(3), 350-366.
- Homburg, C., Hoyer, W. D., & Fassnacht, M. (2002). Service orientation of a retailer's

- business strategy: Dimensions, antecedents, and performance outcomes. *Journal of Marketing*, 66(4), 86-101.
- Hoyle, R. H. (1995). The structural equation modeling approach: Basic concepts and fundamental issues. In R.H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 1-15). Thousand Oaks, CA: Sage Publication, Inc.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1-55.
- Huselid, M. A. (1995). The impact of human resource management practices on turnover, productivity and corporate financial performance. *Academy of Management Journal*, 38(3), 635-872.
- Jose, E. P. (2008). *Welcome to the moderation/mediation help centre: Version 2.0*. School of Psychology, Victoria University of Wellington, Wellington, New Zealand.
- Jöreskog, K., & Sörbom, D. (2005). *Lisrel 8.72, Scientific Software International*. Retrieved from <http://www.ssicentral.com/lisrel/>
- Judd C. M., & Kenny, D. A. (1981). Process analysis: Estimating mediation in treatment evaluations. *Evaluation Review*, 5, 602-619.
- Kim. Y. (2009). Validation of psychometric research instruments: The case of information science. *Journal of the American Society for Information Science & Technology*, 60(6), 1178-91
- Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.) New York: Guilford.
- Kinzl, J.F., Knotzer, H., Traweger, C., Lederer, W., Heidegger, T., & Benzer, A. (2004). Influence of working conditions on job satisfaction in anaesthetists. *British Journal of Anaesthesia*, 94(2), 211-215.
- Kozlowski, S., & Klein, K. (2000). *A multi-level approach to theory and research in Organizations*. San Francisco: Jossey Bass.
- Locke, E. A. (1976). *The nature and causes of job satisfaction: Handbook of industrial and organisational psychology*. Palo Alto, CA: Consulting Psychologists Press.
- Lynn, M. L., Lytle, R. S., & Bobek, S. (2000). Service orientation in transitional markets: Does it matter? *European Journal of Marketing*, 34(3/4), 279-298.
- Lytle, R. S., & Timmerman, J. E. (2006). Service orientation and performance: Anorganizational perspective. *Journal of Services Marketing*, 20(2), 136-147.
- Lytle, R.S., Hom, P. W., & Mokwa, M. P. (1998). Serv*Or: A managerial measure of organizational service-orientation. *Journal of Retailing*, 74(4), 455-489.
- MacCallum, R.C., & Austin, J.T. (2000). Applications of structural equation modeling in psychological research. *Annual Review of Psychology*, 51, 201-226.
- Mark, B.L., & Sockel, H. (2001). A confirmatory factor analysis of IS employee motivation and retention. *Information and Management*, 38, 265-276.
- Ministry of Education and Sports (1999). The Education and Sports Annual Performance Report. Retrieved from: <http://www.education.go.ug/>
- Ministry of Education and Sports (2010). The Education and Sports Annual Performance Report. Retrieved from: <http://www.education.go.ug/>
- Moncarz E., & Zhao J. (2009). An exploratory study of US lodging properties' organizational practices on employee turnover and retention. *Journal of Contemporary*

- Hospitality Management*, 21(4), 437-458.
- Morgan, R.M., & Hunt, S.D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 64(3), 50-64.
- Newstrom, J., & Davis, K. (2001). *Organizational behavior: Human behavior at work*. New York: McGraw-Hill.
- Parasuraman, A., Zeithamal, V. A., & Berry, L. L. (1999). SERVQUAL: A multiple item scale for measuring organizational service orientation. *Journal of Retailing*, 64(1), 12-40.
- Pfeffer (1982). *Organizations and organization theory*. Boston: Pitman.
- Ramlall, S. (2003). Managing employee retention as a strategy for increasing organizational competitiveness. *Applied H.R.M. Research*, 8(2), 63-72.
- Reichheld F, & Sasser, W. (2000). Zero defections: Quality comes to service. *Harvard Business Review*. Retrieved from: <http://hbr.org/1990/09/zero-defections-quality-comes-to-services/ar/1/>
- Rigdon, E.E. (1998). Structural equation modeling. In G.A. Marcoulides (Ed.), *Modern methods for business research* (pp. 251-294). Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.
- Roos G., Burgman, R. J., Ballow, J., & Thomas, R. J. (2005). No longer 'out of mind': Intellectual capital approach in Asset Economics Inc. and Accenture LLP. *Journal of Intellectual Capital*, 6(4), 588-614.
- Rust, R. T., Zahorik, A. J., & Keiningham, T. L. (1993). *Service marketing*. New York: Harper Collins College Publishers.
- Sharma, N., & Patterson, P.G. (2000). Switching costs, alternative attractiveness and experience as moderators of relationship commitment in professional consumer services. *International Journal of Service Industry Management*, 11(5), 470-490.
- Sinclair, I., Baker, C., Wilson, K., & Gibbs, I. (2005). *Foster Children: Where They Go and How They Get On*. London: Jessica Kingsley.
- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. In S. Leinhardt (Ed.), *Sociological methodology 1982* (pp. 290-312). San Francisco: Jossey-Bass.
- Spector, P.E. (1997). *Job satisfaction*. Thousand Oaks, CA: Sage.
- Ssewanyana S., & Matovu J. M. (2011). Yes Africa can: Success stories from a dynamic continent. Retrieved from: <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/0,,contentMDK:22549653~pagePK:146736~piPK:146830~theSitePK:258644,00.html/>
- Susskind, L., McKearnen, S., & Thomas-Lamar, J. (Eds.). (1999). *The Consensus building handbook: A comprehensive guide to reaching agreement*. Thousand Oaks, CA: Sage Publications.
- Tabachnick, B., & Fidell, L. (2001). *Using multivariate statistics*. Needham Heights, MA: Allyn & Bacon.
- Tsoukas, H. (1989). The validity of idiographic research explanations. *Academy of Management Review*, 14, 551-561.
- Turney, W., & Feldman, G. (2004). Organizational behavioral and performance. *Journal of Organizational Behavior*, 11(1), 227-242.
- Van de Ven, A. H., & Poole, M. S. (1995). Explaining development and change in organizations. *Academy of Management Review*, 20(3), 510-540.

- Vila, Luis E., & Garcia-Mora, B. (2005). Education and the determinants of job satisfaction, *Education Economics*, 13(4), 409-425.
- Werbel, J. D., & Gilliland, S. W. (1999). The use of person–environment fit in the selection process. *Research in personnel and human resources management*, 17, 209–243.
- Weiss, D., Dawis, R., England, G., & Lofquist, L. (1967). *Manual for the Minnesota satisfaction questionnaire*, Minnesota Studies in Vocational Rehabilitation. Minnesota University, Minneapolis, MN.
- Yamane, T. (1973). *Statistics: An Introductory Analysis* (3rd ed.). New York: Harper & Row.
- Yoon, S. J., Choi, D. C., & Park, J.W. (2007). Service orientation: Its impact on business performance in the medical service industry. *The Service Industries Journal*, 27(4), 63.
- Zeffane, R. (1994). Patterns of Organizational Commitment and Perceived Management Style - a Comparison of Public and Private-Sector Employees. *Human Relations* 47(8), 977-1010.

Workplace Emotional Perception: An Ability-Based Measure

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The purpose of this study is to develop a short, valid, and ability-based measure of workplace Emotional Perception (EP). By exploring its validity, this paper will seek to study the importance of Emotional Perception in such workplace outcomes as job stress and Job-Related Negative Affect. Survey data was obtained in two studies. The measure of Emotional Perception is negatively related to job stress and job-related negative emotions. It also discriminated between affective personality traits such as neuroticism and extraversion. Because of test length and lack of general access, existing ability-based emotional intelligence measures are not frequently used in workplace studies. Therefore, having a short and valid emotional perception measure will help increase its use in workplace context. Additionally, this will help managers understand the impact of emotional perception ability in such workplace outcomes as job stress and a negative job-related affect. This is the first ability-based, emotional perception measure specifically formatted for use in the workplace. It is believed that this measure could be used to select and/or assign employees based on their emotional intelligence to different jobs.

Twenty years since its proposition, Emotional Intelligence (EI) (Salovey & Mayer, 1989), or the ability to deal with emotions, and its research scenario, is either a smoldering cauldron of existential debate and controversy, or a warm crucible of constructive conversation (Becker, 2003; Landy, 2005). It is clear that measures that are theoretically aligned with the ability-based definition, and at the same time demonstrate impactful criterion validity need to be developed (Joseph & Newman, 2010; Murphy, 2006). Here, data will be presented validating a new EI-perception measure.

Emotional Intelligence: From Global Construct Definition to Specific Dimensions

In this paper, the original intelligence-based definition proposed by Mayer and Salovey (1997) and validated by others is followed (e.g., MacCann & Roberts, 2008). Emotional Intelligence (EI) is defined as a type of intelligence that helps individuals to perceive, thoughtfully use, understand, and manage emotions in themselves and others (Mayer & Salovey, 1997). Each of these abilities is categorized as a hierarchical (or sequential; from basic to applied) branch of a global EI construct (sometimes also referred to as facets). Branch 1 (Emotion Perception) includes abilities that help individuals to identify or “read” emotions in themselves or in others. Branch 2 (using emotions in thoughts) includes abilities that help individuals assimilate emotions into thoughts. Branch 3 (understanding) includes abilities that help individuals to understand the finer shades of complex emotions and to accurately predict how emotions transition over time. Branch 4 (managing emotions) includes abilities that help individuals to modify emotions in social situations. Investigators have studied EI at the global construct level as well as at the branch level. Similar to the efforts of MacCann and Roberts (2008), this measure-development effort is done at the branch level. Emotion Perception ability is focused on for several reasons. First, Emotion Perception has a strong knowledge component. Previous research indicated that individuals who were trained to read other people’s emotions could in fact, improve their skills (Elfenbein, 2006; Grinspan, Hemphill, & Nowicki, 2003). Though the global construct of EI is conceptualized as a stable ability, better knowledge and skill of Emotion Perception does help substantially in successfully handling social situations. Second, research has also suggested that the Emotion Perception ability is one of the most basic and clearly defined among the four components of EI (Davies, Stankov, & Roberts, 1998). Emotion Perception (or recognition) is very important to the workplace outcomes. Elfenbein and Ambady (2002) showed that people’s ability to perceive others’ emotions helped them perform better as leaders (Rubin, Munz, & Bommer, 2005). Research also showed that salespeople who were better at emotion recognition sold more cars and earned more pay raises (Byron, Terranova, & Nowicki Jr., 2007).

Emotional Perception: Measurement

Broadly, like EI, Emotion Perception has typically been measured using self-report measures and ability-based (problem solving) measures. Self-report measures, as shown in recent meta-analyses and reviews, have their own advantages (O’Boyle Jr. et al., 2010; Walter, Cole, & Humphrey, 2011). They provide good criterion-related validity. They are shorter, more freely available, face-valid, and convenient to use. It was decided to use the ability-based (performance) tests for two reasons (Brackett et al., 2006). First, self-report measures are more prone to being false than ability-based tests, especially in high-stakes testing conditions (Day & Carroll, 2008). Second, Mabe and West’s (1982) meta-analysis showed that individuals’ perceptions of their own intelligence were weakly correlated with their actual scores on ability-based intelligence tests. Therefore, the ability-based, problem solving paradigm of measuring

Emotion Perception was followed. This method and EI's measurement in general, have at least three major challenges: the "right answer" problem, test length, and the extent of domain specific information.

The "Right Answer" Problem

Measuring EI using problem solving tests presents a unique challenge — the "right answer" problem. Because it is much more difficult to find objective and correct answers to problem solving items on the EI test, researchers have used a consensus of a large number of people (e.g., >100) or a smaller number of experts (e.g., 20) to determine the correct answer (Mayer et al., 2003). These approaches assume that a consensus of a large number of individuals accurately reflects the "correct" answer from a societal perspective (for a comparison of scoring methods, please see MacCann et al., 2004).

Test Length

To reliably measure all the branches of EI, a large number of items are typically used (e.g., MSCEIT with 141 items). An exception is the Consumer Emotional Intelligence Scale (CEIS) with 18 items (Kidwell, Hardesty, & Childers, 2008). In previous studies, scientists either measured EI globally or studied individual components. In addition to allowing researchers to study individual abilities (or branches) more clearly, focusing on individual branches also helped to bring down the overall number of items. Shorter measures of EI abilities at the branch level could allow for more extensive usage of these measures in a larger number of field settings. For example, in a law enforcement setting, a detective could use Emotion Perception ability to detect facial expressions and emotion changes in a suspect in order to determine his/her future behavior or attitudes. Therefore, for selection and/or reassignment decisions in that specific context, an EI-Perception test could be more appropriate, valuable, and practical due to its short length.

Extent of Domain Specific Information

The third challenge in measuring EI-perception concerns the extent of domain-specific (e.g., management, marketing) information in which EI's abilities are used and measured. For example, a human resources manager who has to be cognizant of anxious reactions due to a newly announced downsizing at an organization would need to use quite specialized and unique ways of perceiving emotions (e.g., read responses of employees who are being laid-off) versus those in a generic situation (e.g., dealing with emotions in a family dispute). Kidwell et al. (2008) highlighted this issue when they proposed a domain-specific measure (specific to consumer decision making), that showed that the CEIS predicted marketing-related criteria better than the domain generic MSCEIT. Perception in CEIS is measured by asking consumers to rate emotions expressed in products rather than faces. Therefore, to effectively assess the specific abilities employees use to perceive emotions at work, it is preferable to use more information relevant and specific to the workplace in the measure. This, however, does not mean that domain generic measures are ineffective. In fact, most measures, except CEIS, are domain generic or mixed. Similar to the use of CEIS in the

marketing domain, the use of additional workplace-specific information in Emotion Perception's measurement is proposed. This proposition is justified by explaining the role of contextual information in situational judgment testing.

It is suggested that test takers' responses to certain situations presented on the test will be of higher quality if they have more information about domain specific behaviors – a phenomenon referred to as the “Frame of Reference effect (FOR)” (Lievens, De Corte, & Schollaert, 2008). In personality measurement, the effect of providing a better FOR has been shown to increase both criterion and face validity. In the development of CEIS, Kidwell et al. (2008) used a similar logic and showed that their test, by the use of consumption-related situational judgment items, predicted consumption criteria better than a domain generic test. Applying this to the workplace domain, most ability-based tests presented test takers with social situations with people, their behaviors, or both. They asked test takers to respond to or rate the intensity and nature of emotions derived from those situations. The most effective responses received higher scores. Using actual behaviors and thoughts which employees engaged in at work, Emotion Perception ability specifically applied to the workplace was also measured. Because this new EI-perception measure is recommended for use with working individuals, it was named the Workplace Emotional Abilities Test-Perception (WEAT-P).

EI Perception: Nomological Net and Validity Evidence

Next, the relationship between EI-perception ability and two workplace criteria will be discussed: job stress and Job-Related Negative Affect (JNA).

Job stress. Stress draws significant amounts of resources in organizations, affecting approximately 50% of people (Avey, Luthans, & Jensen, 2009; Spector, 2002). Most theories of job stress describe the relationship between job demands and the resources available to or in control of the employees (Fox, Dwyer, & Ganster, 1993). The Appraisal or Transaction (or Relational) Theory of Stress put forth by Lazarus and Folkman (1987) suggested that cognitive evaluations of environmental stimuli mediated the relationship between specific events and health outcomes. Components of a job or environment that cause physiological and psychological stressful reactions in employees are called stressors (Spector, 2002). If the environmental stimuli are considered a threat and beyond an employee's resources, he or she is likely to feel more stress. The most dominant theory in the occupational domain is the Job Demands Control Theory (Van Der Doef & Maes, 1999; Karasek, 1979), which states that when individuals feel that the job demands are large and they have less control on the dimensions of their job, they are likely to feel more stress.

Emotions are closely related to stress. Previous research showed that EI can be associated (negatively) with different forms of stress (Brackett & Salovey, 2006; MacCann & Roberts, 2008; Matthews et al., 2006). Jordan, Ashkanasy, and Hartel (2002) theorized the possible role of EI in affective reactions to job insecurity and job tension. Therefore, it is particularly interesting to study EI's role in the attenuation of job stress. Perception ability (Branch 1) could help individuals identify the reactions to a stressful event (e.g., feeling anxious before a task deadline). This could then help individuals to further deal with the emotions using other branches of EI (Schutte et al., 2007). Thus,

Hypothesis 1: The WEAT-P score will be negatively correlated with job stress.

There is a notion of “good” stress and “bad” stress named “challenge” stress and “hindrance” stress, respectively (Cavanaugh et al., 2000). Rodell and Judge (2009) recently found evidence for negative affective reactions associated with these different kinds of stresses, with hindrance stress causing more negative effects and counterproductive behaviors than challenge stress. More negative effects due to stress could facilitate the role of Emotion Perception. Because hindrance stress causes a more negative effect, it is suggested that the role of Emotion Perception would be more pronounced (in attenuating the negative reactions to stress) in hindrance stress than challenge stress (Rodell & Judge, 2009). One of the after-effects of stress (especially hindrance stress) is the elicitation of negative affect (Rodell & Judge, 2009). Therefore, it is pertinent to investigate whether EI is also attenuating the elicitation and expression of Job-Related Negative Affect (JNA).

Job-Related Negative Affect. In the past decade, there has been an increased emphasis on the study of affect (Brief & Weiss, 2002; Ashkanasy, 2003). Affective Events Theory (AET) (Weiss & Cropanzano, 1996) suggests that events in the workplace produce short-term affective reactions and can have long-term effects on job attitudes (e.g., job satisfaction). Each of these effects could be influenced by traits (e.g., neuroticism and extraversion) or abilities (e.g., EI). Even so, there appears to be few studies that have looked at the direct effects of Emotion Perception on affect. Most job events could lead to some amount of positive or negative affect/emotions (Basch & Fisher, 2000). There is a well-established link between negative affect and enduring job attitudes. Thoresen et al.'s (2003) meta-analytic findings suggested that negative affect led to lower job satisfaction and increased job-withdrawal behaviors.

It is proposed that Emotion Perception ability will play an important role in shielding employees from negative affect specifically produced from job events and/or stress. When such emotions are elicited, Emotion Perception ability could help individuals to identify those emotions. Because Emotion Perception provides the first basic step in the EI framework, individuals will thus be able to use their other abilities (understanding, and management) to handle those negative emotions (Joseph & Newman, 2010). Thus, EI-perception ability will be associated with significantly reduced negative affect produced from the job. Thus,

Hypothesis 2: The WEAT-P score will be negatively correlated with job-related negative effects.

Feldman (1995) proposed that affective experiences could be mapped onto a circumplex based on two dimensions: valence (hedonic tone) and activation (arousal). Following Spector's (2007) terminology, each respective category was referred to as Low Pleasurable, High Activation (LPHA) and Low Pleasurable, Low Activation (LPLA). LPHA-emotions have been particularly known to influence outcomes in organizations (Thoresen et al., 2003). It is proposed that Emotion Perception will more strongly and negatively influence job-related LPHA-emotions. Thus,

Hypothesis 3: The WEAT-P score will correlate more strongly and negatively with the LPHA score (negative, highly activated job-related emotions) than the LPLA score.

General Method

Overview

Two studies demonstrating the development and validation of a short and workplace-based emotion perception measure are presented. The ability-based framework proposed by Mayer and Salovey (1997) and the situational judgment test-framework were followed.

Study Design

A survey design was used for this study.

Participants

Study 1 consisted of working undergraduate students and Study 2 consisted of alumni from a Midwestern university.

Procedure

Study 1 was administered through a paper and pencil format, with initial validation done through an online method, and Study 2 was completely administered online.

Data Analyses

The new measure's internal structure was analyzed by Confirmatory Factor Analyses in AMOS and the nomological net information (convergent-, discriminant-, and criterion-related validities) were determined by correlational analyses.

Study 1

In Study 1, the WEAT-P was evaluated in a sample of working students (N = 228). The criterion validity was evaluated by studying the relationship between EI and job stress and EI and Job-Related Negative Affect. Such personality traits as neuroticism (propensity to be around negative affect) and extraversion (propensity to be positive and cheerful in social interactions) had previously been associated with the study of stress and negative effects. Therefore, neuroticism and extraversion were also included in this study.

Study 1 Method

Sample and Participants

330 undergraduate business students were invited to participate in this study. A total of 270 responded (response rate = 87.2%), out of which 228 (both male and female) respondents were either employed currently or were in the recent past (within 30 days). All students were rewarded with extra credit for their participation.

Procedure

The study was administered in the paper-pencil survey format. Subjects responded to questions related to demographics, EI (using the WEAT-P), personality (neuroticism and extraversion), Job-Related Negative Affect, and job stress.

Measure Development and Initial Validation

The WEAT-P was developed to measure Emotion Perception ability given the context of the workplace. In addition to the unique frame of reference, WEAT was created with usability in mind. Brevity, therefore, was an important element considered. This Emotion Perception Abilities measure was developed in three steps. Step 1 included an initial exploratory phase in which respondents were asked open-ended questions about emotional situations in the workplace. These answers were used to create 10 scenario-based items each with 11 emotions (total number of responses = 110) which were then asked in Step 2. Step 2 was a usability study. The 110 response items were sent to a sample of working students. Based on these results, the measure was shortened to 3 scenario-based items, each with 11 emotions for a total of 33 response items. In the final validation step, the measure was given to another sample of students. The measure had significant correlations with conscientiousness, agreeableness, and alexithymia (negative) as expected. The measure also showed discriminant validity when other personality variables such as neuroticism and extroversion were considered. For more detailed information see Krishnakumar and Hopkins (2013). The entire measure thus consisted of three scenarios, with 11 items each, and is presented in Appendix A.

The Emotion Perception measure developed and validated above was used in this study to further investigate the effects of EP on job stress and job negative emotions. The 33-item WEAT-P measure had $\alpha = .89$. A Confirmatory Factor Analysis (CFA) with AMOS v. 16 software was performed (Arbuckle, 2006). In Study 1, individual items were combined to form 4 parcels (Nasser & Wisenbaker, 2003). Parcel 1, 2, & 3 had 8 items, and parcel 4 had 9 items. The CFA (measurement) model showed moderate fit ($\chi^2 = 19.83$, $df = 2$, $p = .00$; NFI = .93; RFI = .79; IFI = .94; TLI = .80; CFI = .93; RMSEA = .19) (Schumacher & Lomax, 1996).

Neuroticism and extraversion. Ten items from the International Personality Item Pool (IPIP) each measured neuroticism ($\alpha = .87$) and extraversion ($\alpha = .89$; Goldberg, 2001). Response options were 1 = "very inaccurate", to 5 = "very accurate."

Job stress. Cavanaugh et al.'s (2000) 16-item measure ($\alpha = .86$) assessed job stress. Six items ($\alpha = .85$) measured challenge stress. Five items ($\alpha = .70$) measured hindrance stress. The measure had items that asked participants to respond to statements describing components of jobs that could potentially cause stress to them (e.g., "the number of projects/assignments I have"). Response options were 1 = "produces no stress", to 7 = "produces a great deal of stress."

Job-Related Negative Affect. Spector's (2007) 15-item measure ($\alpha = .86$) assessed Job-related Negative Affect. These items were part of the Job-related Affective Well Being Scale (JAWS). Items asked respondents to indicate the amount to which their job made them feel a particular emotion (e.g., "my job made me feel angry") in the past 30 days. Response options ranged from 1 = "never", to 5 = "extremely often."

The negative affect-related items in JAWS assessed two kinds of negative affective experience: Negatively valenced or Low Pleasurable, High Arousal (LPHA items: angry, anxious, disgusted, frightened, and furious) and Low Pleasurable, Low Arousal (LPLA items: bored, depressed, discouraged, gloomy, and fatigued). Five items each measured LPHA ($\alpha = .74$) and LPLA ($\alpha = .64$).

Study 1 Results

Means, standard deviations, and zero-order correlations between the study variables are reported in Table 1.

Table 1: Means, Standard Deviations, and Zero-order Correlations

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1 Age	21.95	2.45	-										
2 Gender	.45	.50	-.13	-									
3 Neuroticism	2.13	.70	-.06	.17*	(.87)								
4 Extraversion	3.74	.74	.08	.04	-.37**	(.89)							
5 Emotion Perception ^a	.43	.10	.12	.13	-.10	.00	(.89)						
6 Challenge Stress	3.64	1.34	-.06	.01	.20**	-.03	-.05	(.85)					
7 Hindrance Stress	2.74	1.22	.133*	-.10	.14*	-.14*	-.09	.39**	(.70)				
8 Job Stress	2.80	.47	.07	-.04	.24**	-.02	-.14*	.75**	.67**	(.86)			
9 LPHA	2.06	.67	.08	-.07	.40**	-.08	-.12	.35**	.38**	.56**	(.74)		
10 LPLA	2.18	.64	.04	-.07	.45**	-.21**	-.06	.20**	.26**	.33**	.64**	(.64)	
11 JNA	2.14	.60	.09	-.09	.45**	-.14*	-.11	.36**	.39**	.57**	.92**	.82**	(.86)

a. Emotion perception is measured by WEAT-P.

* = $p < .05$, ** = $p < .01$; N = 217-228 (pair-wise deletion); LPHA = Low Pleasurable, High Activation; LPLA = Low Pleasurable, Low Activation; JNA = Job-related Negative Affect.

From Study 1, the results are as follows:

Hypothesis 1, which stated that the WEAT-P score would be negatively and significantly correlated with job stress, was supported ($r = -.14$; $p < .05$).

Hypothesis 2, which stated that the WEAT-P score would be negatively correlated with Job-related Negative Affect (JNA), was not supported ($r = .11$; $n.s.$).

Hypothesis 3, which stated that the WEAT-P score would correlate more strongly and negatively with LPHA-emotions (negative, highly activated job-related emotions), was also not supported ($r = -.12$; $n.s.$).

Study 1 Discussion

In addition to showing the role of EI-perception ability in job stress, Study 1 also revealed that the 33-item WEAT-P showed good reliability and validity. This is a good contribution to EI-perception’s measurement, as the measure is much shorter than most ability-based measures currently validated (except the 18-item CEIS, which is specifically used in the consumer decision making domain). This could help increase the usage of EI measures in more field studies in the workplace. The findings also

indicated that the WEAT-P demonstrated correlations with job stress, but not with Job-related Negative Affect.

As expected, WEAT-P was also not related to neuroticism and extraversion. This finding is important because many critics have suggested that affective personality traits like neuroticism and extraversion could overlap substantially with certain measures of EI (Schulte, Ree, & Carretta, 2004). The findings extended or confirmed other researchers' findings that performance or ability-based measures of EI did show good discriminant validities with potentially similar personality variables. The WEAT-P showed a significant and negative relationship with job stress. Job stress was a very important construct still being evaluated with respect to the formation of short-term affective reactions and long-term behaviors and attitudes (e.g., turnover, burnout).

However, the WEAT-P did not show a statistically significant correlation with Job-related Negative Affect. One of the reasons for the lack of correlation could be because this sample exclusively consisted of undergraduate students who were working part-time. The WEAT-P is formatted with situations and themes directed at the workplace. Therefore, although working part-time, it is possible that most participants in Study 1 may not have been exposed to the wide variety of affective situations that are presented in the WEAT-P, and hence may not have responded to the items effectively. Study 2 aims to address this limitation by studying the role of EI in job stress and Job-related Negative Affect in a more experienced working sample.

Study 2 Introduction

This study further examines the criterion validity by studying the effect of EI on job stress and JNA in an older field sample with more work experience (N = 151). The implications of the findings, limitations of the study, and potential for future research are discussed.

Study 2 Method

Sample and Participants

A group of 3,090 alumni and trustees of a Midwestern university were invited through e-mail to participate in an online study. One hundred and fifty one responses were received (response rate = 4.88%; 39.6% female). Participants substantially varied in age and were older on average when compared to the Study 1 sample (22-71 years, mean = 36.9 years, s.d. = 10.53). Participants held a variety of job positions/titles (e.g., Vice President, researcher, consultant, driver). Participants were not rewarded for responding to the survey.

Procedure

An internet link was provided at the end of the study invitation. Participants clicked this link which took them to a website on which the Institutional Review Board cover page was displayed. Then they completed items from the WEAT-P, some information about their jobs (e.g., job type, job title), the job stress measure, and items from the Job-related Affective Well Being Scale (JAWS).

Measures

Measures used in Study 2 were 33 items from the WEAT-P ($\alpha = .88$), 16 items from the job stress measure ($\alpha = .82$), and 15 items (measuring negative affect) from the JAWS ($\alpha = .92$; $\alpha_{LPHA} = .67$; $\alpha_{LPLA} = .64$). The content of the measures were similar to the content of the same measures used in Study 1. The job stress measure was slightly modified and asked respondents about the components of their jobs (e.g., the amount of travel required) that caused stress to them. The respondents held a wide variety of job titles and were recruited from a variety of occupations. Some respondents in Study 1 noted that some of the items on the job stress measure did not apply to their job. Because Study 2 recruited people from an even wider variety of occupations, the response options were modified so that they ranged from 1 = “produces no stress”, to 5 = “produces a great deal of stress”. A “not applicable” option was also added to the response options. This ideally would accurately assess job stress, taking into account the variety of occupations of the respondents. Six items ($\alpha = .84$) measured challenge stress and five items ($\alpha = .61$) measured hindrance stress based on previous research (Cavanaugh et al., 2000).

Similar to Study 1, a Confirmatory Factor Analysis (CFA) with AMOS v. 16 software was performed (Arbuckle, 2006). Again, individual items were combined to form 4 parcels (Nasser & Wisenbaker, 2003). Parcel 1, 2, & 3 had 8 items, and parcel 4 had 9 items. The CFA (measurement) model showed an excellent fit ($\chi^2 = .99$, $df = 2$, $p = .61$; $NFI = .99$; $RFI = .97$; $IFI = 1$; $TLI = 1$; $CFI = 1$; $RMSEA = .00$) (Schumacher & Lomax, 1996).

Study 2 Results

Means, standard deviations and zero-order correlations between the study variables are reported in Table 2.

Table 2: Means, Standard Deviations, and Zero-order Correlations

	Means	SD	1	2	3	4	5	6	7	8	9
1 Age	36.86	10.54	-								
2 Gender	.43	.53	-.19*	-							
3 Emotion Perception ^a	.46	.09	.17*	-.05	(.88)						
4 Challenge Stress	3.27	.87	.14	-.02	-.01	(.84)					
5 Hindrance Stress	2.56	.80	.05	.04	-.28**	.15	(.61)				
6 Job Stress	2.73	.31	.06	-.04	-.22*	.60**	.52**	(.82)			
7 LPHA	2.22	.71	-.01	-.14	-.27**	.28**	.40**	.59**	(.67)		
8 LPLA	2.25	.70	-.09	-.14	-.22*	.22*	.36**	.47**	.77**	(.64)	
9 JNA	2.30	.68	-.04	-.12	-.27**	.30**	.41**	.59**	.94**	.90**	(.92)

a. Emotion perception is measured by WEAT-P.

* = $p < .05$, ** = $p < .01$; N = 120-136; LPHA = Low Pleasurable, High Activation; LPLA = Low Pleasurable, Low Activation; JNA = Job-related Negative Affect.

The results of Study 2 are as follows:

Hypotheses 1, 2, and 3 were again tested in this sample. Hypothesis 1, which stated that the WEAT-P score would be significantly and negatively correlated with job stress, was supported ($r = -.22$; $p < .05$).

Hypothesis 2, which stated that the WEAT-P score would be negatively correlated with Job-Related Negative Affect (JNA), was supported ($r = -.27$; $p < .01$).

Hypothesis 3, which stated that the WEAT-P score would correlate more strongly and negatively with LPHA-emotions (negative, highly activated job-related emotions), was not supported ($r = -.27$, n.s.). Note here that the reliabilities for LPHA and LPLA were .67 and .64 respectively. However, their correlations with Emotion Perception were significant (LPHA, $r = -.27$, $p < .01$; LPLA, $r = -.22$, $p < .05$). Because their reliabilities were low, the results are only suggestive and not conclusive. Further studies would be needed.

Study 2 Discussion

The findings in Study 2 demonstrated criterion validity evidence for the WEAT-P. While Study 1 showed that the WEAT-P was significantly and negatively related to job stress, Study 2, with a working sample, showed that the WEAT-P was much more strongly related to job stress, particularly hindrance stress. This was in line with the theory behind challenge and hindrance stressors. Challenge stressors are components of the workplace that encourage and challenge employees to work harder. It could be portrayed as the “good” stress, that many times is needed for organizations to motivate employees (Cavanaugh et al., 2000). The WEAT-P did not affect challenge stress, which suggests that EI could ultimately help organizations through its effects on positive outcomes. Hindrance stressors have been shown to negatively affect organizational outcomes. The WEAT-P showed a negative correlation with hindrance stressors, with the caveat that the hindrance stress measure showed poor reliability (.61). More studies will be needed to see if this result can be replicated. This suggests that the WEAT-P could be useful in predicting workplace stress that is related to hindrances. Hindrance stressors are job components that are beyond employees’ control.

Study 2 had some limitations. Like Study 1, Study 2 was also cross-sectional. Job stress occurs over a period of time. Reactions to it also occur over a period of time. Therefore, to understand the finer details of how each stressor leads to stress and how each stressor leads to certain kinds of emotions, a longitudinal and/or sampling design (e.g., Rodell & Judge, 2009) would be even more informative.

General Discussion

Theoretical Implications

WEAT-P is the only measure of Emotion Perception specifically designed for the workplace. The WEAT-P, with 3 item packets and 33 items, is also one of the shortest measures of individual dimensions of EI. Observing the results of the three studies, the WEAT-P showed good reliability and discriminant validity. Overall, the WEAT-P did not correlate substantially with neuroticism and extraversion. The WEAT-P was also useful in predicting job stress and JNA. As far as is known, this is the first study that has examined the role of EI-perception ability and these constructs. In addition to showing the predictive and incremental validity of the new measure, the paper also demonstrated the role of EI-perception in outcomes that could potentially emerge from job stress and/or negative job effects.

Managerial Implications

The relationship between EI and job stress and EI and active JNA are also particularly interesting. Scientists and practitioners often write about the “calming” role of EI in stressful situations at work (Jordan et al., 2002). Thus, the WEAT-P could be potentially useful in selecting and assigning individuals in the kinds of jobs that would typically encounter highly affective and/or stressful situations (e.g., attending to a seriously injured patient at an emergency room). Because of the short length of the scale, it is also believed that researchers and practitioners will be able to practically assess EI-perception in active working situations.

Limitations and Direction for Future Research

This study had several limitations. First, in Study 1, the measure indicated fit indices that were lower than the cut-offs recommended by Schumacher and Lomax (1996). However, in Study 2, the measure showed excellent fit. Study 2 had the most experienced sample compared to Study 1. This could have influenced the fit. Second, reliabilities of some of the measures (e.g., LPLA in Study 1; LPHA and LPLA in Study 2) had reliabilities lower than 0.7. Those results should only be taken as suggestive and not conclusive — more studies will be needed to further confirm the differential role of EI-perception in these outcomes. Third, the study overall seemed to explain a lower amount of variance than most studies. However, looking at the literature, this seems to be fairly typical of EI-perception (e.g., $r = .17$ with leadership behavior, Rubin et al., 2005; meta-analytic $r = .18$ with performance in highly affective jobs) (Joseph & Newman, 2010). This level of prediction will hopefully be crucial to organizations.

While this study demonstrated some effects of EI, it also revealed other interesting areas of future research. Further research could examine this effect in more detail. For example, would EI affect anger, anxiety, and sadness differently? Similarly, would EI have different effects on different kinds of stress? More studies could also investigate whether EI moderates the relationship between job stress and JNA.

Conclusion

To conclude, the two studies presented in this paper underlined the role of EI-perception in such relevant criteria as motivation to lead, job stress, and Job-related Negative Affect in the workplace.

References

- Arbuckle, J. L. (2006). Amos (Version 7.0) [Computer Program]. Chicago: SPSS.
- Ashkanasy, N. M. (2003). Emotions in organizations: A multi-level perspective. *Research in Multilevel Issues*, 2, 9-54.
- Austin, E. J. (2005). Emotional intelligence and emotional information processing. *Personality & Individual Differences*, 39, 403-414.
- Avey, J. B., Luthans, F., & Jensen, S. M. (2009). Psychological capital: A positive resource for combating employee stress and turnover. *Human Resource Management*, 49, 677-693.

- Basch, J., & Fisher, C. D. (2000). Affective events-emotions matrix: A classification of work events and associated emotions. In N. M. Ashkanasy, C. E. Härtel, & W. J. Zerbe (Eds.), *Emotions in the workplace: Research, theory, and practice*. Westport, CT: Quorum Books/Greenwood Publishing Group, 36-48.
- Becker, T. (2003). Is emotional intelligence a viable concept? *Academy of Management Review*, 28, 192-195.
- Brackett, M. A., & Salovey, P. (2006). Measuring emotional intelligence with the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT). *Psicothema*, 18, 34-41.
- Brackett, M. A., Rivers, S. E., Shiffman, S., Lerner, N., & Salovey, P. (2006). Relating emotional abilities to social functioning: A comparison of self-report and performance measures of emotional intelligence. *Journal of Personality and Social Psychology*, 91, 780-795.
- Brief, A. P., & Weiss, H. M. (2002). Organizational behavior: Affect in the workplace. *Annual Review of Psychology*, 53, 279-307.
- Byron, K., Terranova, S., & Nowicki Jr., S. (2007). Nonverbal emotion recognition and Salespersons: Linking ability to perceived and actual success. *Journal of Applied Social Psychology*, 37(11), 2600-2619.
- Cavanaugh, M. A., Boswell, W. R., Roehling, M. V., & Boudreau, J. W. (2000). An empirical examination of self-reported work stress among U.S. managers. *Journal of Applied Psychology*, 85, 65-74.
- Cohen J., & Cohen P. (1983). *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences*. Hillsdale, NY: Lawrence Erlbaum Associates.
- Davies, M., Stankov, L., & Roberts, R. D. (1998). Emotional Intelligence: In search of an elusive construct. *Journal of Personality and Social Psychology*, 75(4), 989-1015.
- Day, A. L., & Carroll, S. A. (2008). Faking Emotional Intelligence (EI): Comparing response distortion on ability and trait-based EI measures. *Journal of Organizational Behavior*, 29, 761-784.
- Elfenbein, H. A. (2006). Learning in emotion judgments: Training and the cross-cultural understanding of facial expressions. *Journal of Non-verbal Behavior*, 30(1), 21-36.
- Elfenbein, H.A., & Ambady, N. (2002). Predicting workplace outcomes from the ability to eavesdrop on feelings. *Journal of Applied Psychology*, 87, 963-971.
- Feldman, L. A. (1995). Valence focus and arousal focus: Individual differences in the structure of affective experience. *Journal of Personality and Social Psychology*, 69, 153-166.
- Fox, M.L., Dwyer, D.J., & Ganster, D.C. (1993). Effects of stressful job demands and control on physiological and attitudinal outcomes in a hospital setting. *Academy of Management Journal*, 36, 289-318.
- Goldberg, L. R. (2001). International personality item pool: A scientific collaboration for the development of advanced measures of personality traits and other individual differences. *Business Administration*, 14(6), 56.
- Grinspan D., Hemphill A., & Nowicki, S. Jr. (2003) Improving the ability of elementary school-age children to identify emotion in facial expression. *Journal of Genetic Psychology*, 164(1), 88-100.
- Jordan, P. J., Ashkanasy, N. M., & Hartel, C. J. (2002). Emotional Intelligence as a moderator of emotional and behavioral reactions to job insecurity. *Academy of Management Review*, 27, 361-372.

- Joseph, D. L., & Newman, D. A. (2010). Emotional intelligence: An integrative meta-analysis and cascading model. *Journal of Applied Psychology, 95*, 54-78.
- Karasek, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly, 24*, 285-308.
- Kidwell, B., Hardesty, D. M., & Childers, T. L. (2008). Consumer emotional intelligence: Conceptualization, measurement, and the prediction of consumer decision making. *Journal of Consumer Research, 35*, 154-166.
- Krishnakumar, S., & Hopkins, K. (2013). The role of emotion perception ability in motivation to lead. *Management Research Review, 37*(4).
- Landy, F. J. (2005). Some historical and scientific issues related to research on emotional intelligence. *Journal of Organizational Behavior, 26*, 411-424.
- Lazarus, R. S., & Folkman, S. (1987). Transactional theory and research on emotions and coping. *European Journal of Personality, 1*, 141-169.
- Lievens, F., De Corte, W., & Schollaert, E. (2008). A closer look at the Frame-of-Reference effect in personality scale scores and validity. *Journal of Applied Psychology, 93*(2), 268-279.
- Mabe, P. A., & West, S. G. (1982). Validity of self-evaluation of ability: A review and meta-analysis. *Journal of Applied Psychology, 67*, 280-296.
- MacCann, C., & Roberts, R. (2008). New paradigms for assessing Emotional Intelligence: Theory and data. *Emotion, 8*, 540-551.
- MacCann, C., Roberts, R. D., Matthews, G., & Zeidner, M. (2004). Consensus scoring and empirical option weighting of performance-based Emotional Intelligence (EI) tests. *Personality and Individual Differences, 36*, 645-662.
- Matthews, G., Emo, A. K., Funke, G., Zeidner, M., Roberts, R. D., Costa, P. T., Jr., & Schulze, R. (2006). Emotional Intelligence, personality, and task-induced stress. *Journal of Experimental Psychology: Applied, 12*, 96-107.
- Mayer, J. D., & Salovey, P. (1997). *What is Emotional Intelligence?* New York: Basic Books.
- Mayer, J. D., Salovey, P., Caruso, D. R., & Sitarenios, G. (2003). Measuring Emotional Intelligence with the MSCEIT V2.0. *Emotion, 3*, 97-105.
- Murphy, K. R. (2006). *A critique of Emotional Intelligence: What are the problems and how can they be fixed?* Hillsdale, NJ: Lawrence Erlbaum Associates.
- Nasser, F., & Wisenbaker, J. (2003). A Monte Carlo study investigating the impact of item parceling on measures of fit in confirmatory factor analysis. *Educational and Psychological Measurement, 63*(5), 729-757.
- O'Boyle Jr., E. H., Humphrey, R. H., Pollack, J. M., Hawver, T. H., & Story, P. A. (2011). The relation between Emotional Intelligence and job performance: A meta-analysis. *Journal of Organizational Behavior, 32*, 788-818.
- Roberts, R. D., Zeidner, M., & Matthews, G. (2001). Does Emotional Intelligence meet traditional standards for an intelligence? Some new data and conclusions. *Emotion, 1*, 196-231.
- Rodell, J. B., & Judge, T. A. (2009). Can "good stressors" spark "bad" behaviors? The mediating role of emotions in links of challenge and hindrance stressors with citizenship and counterproductive behaviors. *Journal of Applied Psychology, 94*, 1438-1451.
- Rubin, R. S., Munz, D., & Bommer, W. H. (2005). Leading from within: The effects

- of emotion recognition and personality on transformational leadership behavior. *Academy of Management Journal*, 48, 845–858.
- Salovey, P., & Mayer, J. D. (1989). Emotional Intelligence. *Imagination, Cognition and Personality*, 9, 185-211.
- Schulte, M. J., Ree, M. J., & Carretta, T. R. (2004). Emotional Intelligence: Not much more than g and personality. *Personality and Individual Differences*, 37, 1059-1068.
- Schumacher, R. E., & Lomax, R. G. (1996). *A beginner's guide to structural equation modeling*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Schutte, N. S., Malouff, J. M., Thorsteinsson, E. B., Bhullar, N., & Rooke, S. E. (2007). A meta-analytic investigation of the relationship between emotional intelligence and health. *Personality and Individual Differences*, 42, 921-933.
- Spector, P. E. (2002). Employee control and occupational stress. *Current Directions in Psychological Science*, 11, 133-136.
- Spector, P. E. (2007). *Instructions for scoring the Job-related Affective Well-being Scale, JAWS*. Retrieved from <http://chuma.usf.edu/~spector/scales/jawsscor.html/>
- Thoresen, C. J., Kaplan, S. A., Barsky, A. P., Warren, C. R., & de Chermont, K. (2003). The affective underpinnings of job perceptions and attitudes: A meta-analytic review and integration. *Psychological Bulletin*, 129, 914-945.
- Van Der Doef, M., & Maes, S. (1999). The Job Demand-control(-support) Model and psychological well-being: A review of 20 years of empirical research. *Work and Stress*, 13, 87-114.
- Walter, F., Cole, M. S., & Humphrey, R. H. (2011). Emotional Intelligence: Sine qua non of leadership or folderol? *Academy of Management Perspectives*, 25, 45-59.
- Weiss, H. M., & Cropanzano, R. (1996). Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. *Research in Organizational Behavior*, 18. Greenwich, CT: JAI Press.

Appendix A: Workplace Emotional Abilities Test-Perception (WEAT-P)

1. Your coworker was unfairly punished by your immediate supervisor. Please rate how strongly you would feel the following emotions. 1=do not feel at all & 7=feel very strongly

	1	2	3	4	5	6	7
Interest							
Joy							
Sadness							
Anger							
Disgust							
Fear							
Frustration							
Pride							
Guilt							
Shame							
Embarrassment							

2. Your coworker has recently experienced a life changing personal problem. That is now carrying over to their work. Please rate how strongly you would feel the following emotions. 1=do not feel at all & 7=feel very strongly

	1	2	3	4	5	6	7
Interest							
Joy							
Sadness							
Anger							
Disgust							
Fear							
Frustration							
Pride							
Guilt							
Shame							
Embarrassment							

3. John is a sales engineer at a musical instrument retailer. One day, a customer praised his extra effort and warm customer service. Please rate how strongly John is likely to feel the following emotions. 1=do not feel at all & 7=feel very strongly

Each of the three vignettes was followed by the following list of emotions and ratings scales.

	1	2	3	4	5	6	7
Interest							
Joy							
Sadness							
Anger							
Disgust							
Fear							
Frustration							
Pride							
Guilt							
Shame							
Embarrassment							

The Impact of Personality Traits and Problem Characteristics on Management Decision-Making Outcomes: Some Experimental Findings and Empirical Conclusions

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Since decision making behavior has been a focus of economic research and practice, both from a scientific and a professional position, there seems to be a dispute whether rational or intuitive decision making behavior leads to better outcomes. By now, scholars agree that effective organizations do not possess the “luxury” to choose between the “application” of intuitive or rational decision making. Instead, they try to understand how different factors like personality traits and problem characteristics influence the decision making process. Reviewing the literature reveals that personality predetermination and the structure of problems (e.g., well-structured problems versus ill-structured problems) have a significant impact on decision making efficiency. Further, the review also shows that there is a lack of application oriented empirical studies in this area of research. Therefore, the aim of this research paper is to propose a framework for an empirical study on how personality traits and problem structure influence the decision making process and outcomes. First hypotheses are derived according to the state of record on how personality predetermination and behavioral patterns in the decision making process lead to higher “socio-economic” efficiency within certain problem categories. Second a causal model and a setup for a laboratory experiment are proposed to allow testing the hypotheses. Finally, the conclusion provides an outlook on how this research might support organizations in their decision making processes.

Numerous research and practical publications in business administration, economics, sociology, psychology, information sciences, etc. have been dealing with the topic of decision making, decision making behavior, outcomes, or with emphasizing various aspects of this research area (i.e., efficiency criteria, individual and collective decision making approaches, human characteristics, degrees of decision making rationality and measuring decision making success) (Gzuk, 1975; Neuert, 2010; Van Riel, Ouwersloot, & Lemmink, 2006; Witte, 1988).

Based on an intensive literature review, an extended theoretical analysis and preliminary empirical evidence, this paper will develop a theoretical framework (Neuert & Hoeckel, 2013); proposing specific cause effect-relations between personality traits as the independent variable and decision making efficiency as the dependent variable, intervened by various structured decision making problems and tasks.

This paper aims to contribute to the advancement of decision making theory by creating a set of basic hypotheses and by testing those hypotheses via an experimental research design. In this context it will add some elements to the scientific state of the art concerning the overall research and whether various normative decision heuristics and observable actual decision making behavior can explain different intended or unintended outcomes of decision making processes in general or in detail within situational contexts.

Theoretical Foundation

The works of Jung (1971) and Westcott (1968) indicated that intuitive or rational human beings shared distinct personality characteristics. Jung divided human behavior into four mental functions and two attitudes, allowing him to describe different types of people. The four mental functions were sensory and intuitive (related to the preference on how people perceived information), along with thinking and feeling (related to the preference on how humans have made judgments). The more “romantic” view (Allinson & Hayes, 1996; Mintzberg, 1994; Sauter, 1999; Sarmany-Schuller, 2010) was that formal business planning relied on the left brain hemisphere’s sequential-logical processes, whereas the less formal intuitive and creative aspects of management were accomplished by the right hemisphere and could not be derived from psychological research (Simon, 1997). The main findings in the study of Shiloh, Salton, and Sharabi (2002) supported the evidence that an intuitive or rational approach in decision making could be related to personality traits or cognitive styles. Within their study they showed that participants with a rational thinking style were more apt to normative judgments while participants with a more intuitive thinking style were prone to more heuristic judgments. According to the Cognitive-Experiential Self Theory (Epstein, 2003) human beings operate on two fundamental information processing systems. The experiential system which operates mainly on an unconscious level, relates to experiences which have been built up in the past. The experiential system can be characterized as automatic, rapid, effortless, associative, and holistic. Although the experiential system is a cognitive system, it derives beliefs from emotional experiences (Epstein, 1991). In contrast, the rational system operates predominantly at the conscious level in an analytical, effortful, affect-free, and relatively slow manner while

demanding high cognitive resources (Epstein, 2003). The rational system is more process and logical-reasoning oriented and requires justification via logic and evidence. The rational system seems to be more suitable when analytical approaches are needed or considerations for long term consequences are at stake (Epstein, 1991). Kahneman (2012) assumed that human beings always addressed System 1 first because it was fast, involved less effort, and was less burdensome. Human beings involved or switched to their slower and more effortful rational system, (System 2), when their first attempt with System 1 failed or did not provide the expected results.

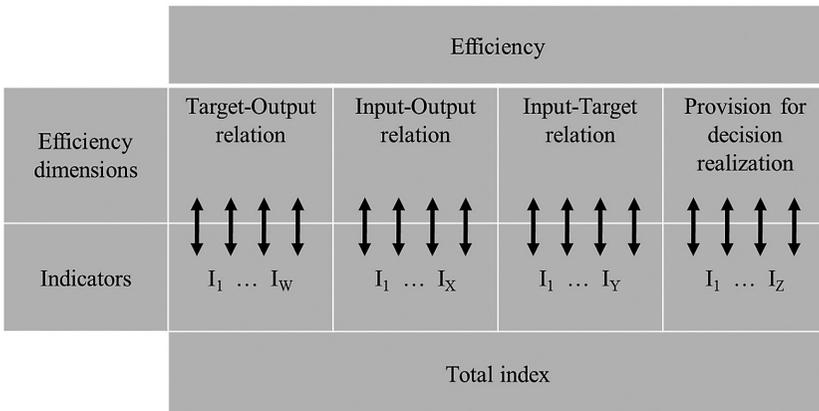
Dijksterhuis et al. (2006) found in their studies that participants facing simple decision making situations performed well when taking a conscious, deliberate effort, whereas participants facing a complex decision making situation performed better when using unconscious, intuitive thoughts. The study also showed that post-choice satisfaction was greater in simple decision making situations when decision makers had taken a deliberate, rational approach. However, for complex decisions, the decision makers experienced greater post-choice satisfaction when they had taken unconscious approaches. For Shapiro and Spence (1997) the approach of the decision making process (intuitive versus rational) depended on the nature of the task (e.g. structured or unstructured). For them, tasks that had a more structured nature like accounts receivable or order entering and inventory control were conducive to analytical reasoning because they typically had well-accepted decision rules. Other tasks with less structured problems like mergers and acquisitions, new product planning and corporate strategy formulation were typical for the "use" of intuition. Van Riel et al. (2006) supported this view that the decision tasks varied with the structure of the decision. They also concluded that well-structured problems called for a rather rational approach, as decision makers can more easily make rational calculations. In turn, ill-structured problems were not for rational decision making as they were characterized by a high degree of uncertainty about the actual and desired situation and therefore, did not have a base for rational calculations.

Another major condition for the nature of the task could be seen in the complexity of the decision making context. Problem complexity can overstrain the physical constitution of a person's brain and therefore, rational decision making may not be as easily achievable when dealing with complex problems. Conscious thoughts in this case suffer from low capacity, making it less suitable for very complex problems (Dijksterhuis et al., 2006; Van Riel et al, 2006; Witte, 1988). Dane and Pratt (2007) saw problem characteristics as one of two factors which influenced intuitive effectiveness. They postulated that the more increasingly unstructured the problems were, the more effective intuitive judgment was compared with rational analysis. For Dane and Pratt (2007) ill-structured problems were conducive to the intuitive decision making process because of the absence of well-accepted decision making rules. The model of Sinclair and Ashkanasy (2002) assumed that behavior in decision making processes was affected by various factors (e.g., cognitive style, problem structure, managerial experience, professional expertise, time pressure, decision importance, etc.). But according to the literature (Allinson & Hayes, 1996; Dane & Pratt, 2007; Feger, 1975; Fields, 2001; Hauschildt et al., 1983; Pretz & Totz, 2007), the individual personality and the ambiguity of the problem task seemed to be two of the bigger contributors to the

degree of decision making efficiency. This is why this paper focuses on the relationship between personality traits and decision making efficiency, but by no means denying that the variables like the ones mentioned above have an impact on decision making efficiency.

Within the scientific community, various opinions exist whether the overall performance accomplished by the decision makers in the course of a decision making process should be labeled either in terms of effectiveness, achievement, quality, etc. The term efficiency will be used as the overall measure of decision making results, because it seems to be the most comprehensive concept of accomplishment evaluation from the point of a scientific observer examining and assessing the conduct and outcomes of decision making processes (Gzuk, 1975; Neuert, 1987; Simon, 1997). Outcomes or the results of decision making in business management can be characterized by different dimensions of efficiency. For Gzuk (1975), to achieve efficiency in the decision making process, there were two conditions which needed to be fulfilled. Firstly, a decision had to create the most efficient ratio between output and input. Secondly, a decision needed to create results which ensured that the intended objectives would be achieved. To determine and to measure efficiency in the decision making process for Gzuk (1975), it was therefore necessary to split the total construct of efficiency into single dimensions. He advocated for three components which described the dimensions of efficiency best: 1) the target of the process, 2) the input, or the resources allocated to the process, and 3) the output, or the result of a process.

Figure 1: Multi-dimensional Indicator Model for Efficiency Measurement



Using this multi-dimensional model (Figure 1) allowed for the measurement of various single efficiency dimensions and then, by combining them, to determine the total efficiency of the decision making process outcomes. Neuert (1987) supported this view by describing the material efficiency as one dimensional, where the measurement was a realistic input and the output comparison in commercial activities could be measured by objective criteria like earnings, profitability, growth, and financial independence. Bronner (1973) referred to this part of efficiency as the economic efficiency. In contrast, for Neuert (1987), in addition to the material efficiency, the personal satisfaction of the decision maker reflected a rather subjective outcome of the

decision making processes. As subjectively assessed results, the literature understood outcomes like identification with the team work, self-reflection on the group behavior, and the decision making contributor's individual role within the group. In sum, he characterized this personal efficiency as the individual evaluation of the decision maker, concerning his results of the decision making process and his self-reflection on their behavior during the decision making process. For Bronner (1973), it was not possible to measure the personal efficiency on an objective basis. He advocated measuring it via the personal activity of the decision maker within a decision making process. As a third dimension, Neuert (1987) saw the formal efficiency, which characterized the comparison of the aimed target or the desired outcomes with the achieved outcome. In this sense, a larger coincidence between the targeted and the current state/situation indicated a higher efficiency and in turn, a smaller coincidence between the targeted and current situation indicated lower efficiency.

Personality predetermination/cognitive styles are mostly measured by psychological self-report instruments. Some of the most well-known and most used measures for the cognitive style or intuitive/rational behavior (Hodgkinson, Langan-Fox, & Sadler-Smith, 2008; Langan-Fox & Shirley, 2003; Pretz & Totz, 2007; Ritchie, Kolodinsky, & Eastwood, 2007; Woolhouse & Bayne, 2000) included the Cognitive Style Index (Allinson & Hayes, 1996), the Agor Intuitive Management Test (Agor, 1986), the Rational-Experiential Inventory (Pacini & Epstein, 1999) and the Myers-Briggs Type Indicator (Briggs Myers et al., 2003). The Cognitive Style Index (CSI) was designed by Allinson and Hayes (1996) to assess individual preferences on information processing. It distinguished between two different cognitive styles: an intuitive style which emphasized feelings, openness and a global perspective and an analytical style which emphasized reasoning, detail, and structure. With a relatively small amount of items (38 items with 3-point ratings), the CSI is convenient for administrating within large scale organizations. To test the use of intuition in management decision making, Agor (1986) tested executives from a wide range of organizations with the Agor Intuitive Management Test (AIM) in 1981. The AIM was a self-report questionnaire including two parts. The first part reflected the ability to use intuition and consisted of 12 questions which were taken from the Myers-Briggs Type Indicator (MBTI®). Depending on the answer of the experimentee, the first part gave an indication on the preferred cognitive style (intuitive or rational). The second part of the AIM test consisted of ten questions and measured the actual use of intuition.

Epstein introduced the Rational-Experiential Inventory (REI), a measurement to assess the preference for rational versus intuitive thinking on the basis of the Cognitive-Experiential Self Theory (CEST) (Pacini & Epstein, 1999). The REI distinguished between two cognitive styles: a rational style which was measured by items being adapted from the Need for Cognition (NFC) scale (Cacioppo & Petty, 1982), and an experiential style which was measured by the Faith in Intuition (FII) scale. These scales were again divided into subscales of ability and favorability. The ability subscale reflected the individual's belief in their ability for using rational or experiential thinking and the favorability subscale reflected the preference to engage in this kind of information processing (Pretz & Totz, 2007).

The Myers-Briggs Type Indicator (MBTI®) is one of the most widely used measures of intuitive traits (Langan-Fox & Shirley, 2003). The MBTI® is a self-reported personality construct which is based on Jungian theory (Jung, 1971). The MBTI® identifies basic preferences on four dichotomies. Those basic preferences describe different ways of how people perceive information (Sensing-Intuition dichotomy) and different ways of making judgments (Thinking-Feeling dichotomy) in combination with different attitudes (Extraversion-Introversion and Judging-Perceiving dichotomy). From a theoretical point of view there are two mental functions, the Sensing/Intuition (S-N) scale which measures the holistic nature of intuition, and the Thinking/Feeling (T-F) scale which measures the affective nature of intuition (Pretz & Tetz, 2007). The MBTI® identifies 16 different personality types which result from the interactions between the four dichotomies (Briggs Myers et al., 2003).

Taking the theoretical background into account, it seemed that individuals facing simple decision making situations performed well when using more conscious and deliberate thoughts, whereas participants facing complex decision making situations performed better when using unconscious, intuitive thoughts. There seemed to be a clear link between the cognitive style and the structure of the problem. The more increasingly unstructured the problems were, the more effective intuitive judgment became in comparison to rational analysis. Ill-structured problems therefore were conducive to the intuition-based decision making process because of the absence of well-accepted decision making rules and vice versa (Dane & Pratt, 2007; Dijksterhuis et al., 2006). Intuitive behavior, using heuristics to solve problems, could be characterized as automatic, rapid, effortless, associative and holistic. This led to the conclusion that intuitive behavior seemed to be more appropriate and therefore more efficient whenever ill-structured problems had to be solved. In contrast, rational behavior could be characterized as process orientated, logic, and reason-oriented and required justification by using analytic approaches to solve problems. This led to the conclusion that rational behavior seemed to be more appropriate and more efficient whenever well-structured problems had to be solved.

Based on those theoretical outlines the following hypotheses can be formulated:

Hypothesis 1: Intuitive rational responses and “discursive” behavioral approaches make a difference in decision making outcomes in connection with different decision making problem structures.

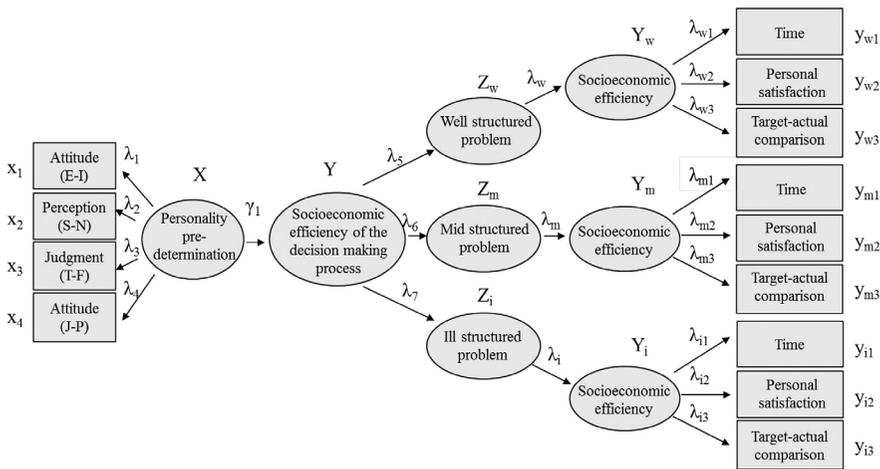
With the sub-hypotheses being,

- H_{01} : *Intuitive behavior in the decision making process leads to higher decision making efficiency within ill-structured problems than rational behavior.*
- H_{02} : *Complimentary intuitive and rational behavior in the decision making process leads to a higher decision making efficiency in mid-structured problems than sole intuitive or rational behavior.*
- H_{03} : *Rational behavior in decision making processes leads to higher decision making efficiency in well-structured problems than intuitive behavior.*

- H_{04} : Rational behavior in decision making processes leads to lower decision making efficiency within ill-structured problems than intuitive behavior.
- H_{05} : Intuitive behavior in decision making processes leads to lower decision making efficiency in well-structured problems than rational behavior.

Based on the theoretical background and on the set of hypotheses outlined above, a path analysis was used to select the relevant causal factors and to establish the proposed relationship between the independent and dependent variables, allowing for the set up of a causal model (Figure 2). The latent exogenous measurement variables x_1, x_2, x_3 and x_4 provided information about the nature of the latent exogenous independent variable X (personality predetermination). The independent structural variable X influenced the intervening variables $Z_w \dots Z_i$ and the dependent $Y_w \dots Y_i$ variables. These dependent variables ($Y_w \dots Y_i$) again were operationalized and measured by the latent endogenous variables $y_{w1} \dots y_{i3}$.

Figure 2: Casual Analytical Model for the Relationship of Personality Traits and Socioeconomic Efficiency in Decision-Making



Legend of the casual model:

- X = Independent structural variable (personality predetermination)
- Y = Dependent structural variable (Socioeconomic efficiency of the decision-making process)
- $Y_w \dots Y_i$ = Socioeconomic efficiency of the decision-making process depending on the problem structure (well-structured, mid-structured, ill-structured)
- $Z_w \dots Z_i$ = Intervening structural variable (structure of the problem)
- $x_1 \dots x_4$ = Latent exogenous measurement variables (personality predetermination)
- $y_{w1} \dots y_{i3}$ = Latent endogenous measurement variables (socioeconomic efficiency)
- γ_1 = Correlation degree between the latent exogenous and latent endogenous variable
- $\lambda_1 \dots \lambda_{u3}$ = Correlation degree between the structural and measure variable

The cause-effect model (outlined in the form of a structural equation concept) depicted the multiple framework of determinants and variables, dealing with the impact of personality traits, behavioral patterns, and decision task structure on decision-making outcomes and decision-making efficiency.

The various elements of personality pre-determination were themselves influenced by the independent variables attitude, perception, judgment, and respective attitude as outlined above. Those independent variables determined the independent personality set on a range between intuition and rationality, mirroring the variety of personality traits. In the next stage, the former dependent variable personality pre-determination became the independent variable in a cause-effect-relations chain, influencing the socio-economic efficiency as the outcomes of the decision-making processes and the dependent variable were affected by the varying (individual) personality traits.

According to the proposed set of hypotheses, the socio-economic efficiency of decision-making processes varied within the problem structure of the decision-making task in connection with the personality traits, meaning that specific personality traits caused different effects in decision-making outcomes, and were dependent on whether the decision-making task was well-structured, mid-structured, or ill-structured. This led to the explanation that the socio-economic efficiency of decision-making processes not only varies with the different degrees of personality pre-determination, but also with the respective problem structure.

Finally, the socio-economic efficiency was measured by the three different dimensions: 1) time used to perform the decision-making tasks, 2) personal satisfaction with the decision-making process, and 3) comparison of the actual results and the intended (target) outcomes of the decision-making process.

The Myers-Briggs Type Indicator was chosen for the determination of the personality/cognitive style even though it was soundly criticized by some literature (Langan-Fox & Shirley, 2003). The MBTI proved to be a valid and reliable instrument as many other published studies demonstrated, especially because the MBTI showed a strong relationship with four out of five scales in the Big Five Model of Personality, measured by the NEO-PI (Furnham, Moutafi, & Crump, 2003; McCrae & Costa, 1989). Further, the MBTI has been one of the most widely used and understood instruments to measure personality traits/cognitive styles within organizations, and therefore allowed direct transfer from research to practice (Hough & Ogilvie, 2005). Appelt et al. (2011) generally recommended using existing and well-known measures without modification where appropriate, as they allowed for a better cross-comparison between different studies. According to Jung's (1971) and Briggs Myers et al. (2003) theory, the four dichotomies were used to assess the personality predetermination. The intervening variable (Z), the problem structure, was operationalized by devoting three different kinds of structures with the well-structured problem (WSP), the mid-structured problem (MSP), and the ill-structured problem (ISP). Based on the theoretical background, the three different structures (WSP, MSP and ISP) were characterized by the following definitions. Ill-structured problems (ISP) could be specified by the following elements: 1) goals were defined vaguely or not at all, 2) the problem description was not clear or well-defined, 3) there was no single objectively correct solution, 4) information to solve the problem was not within the problem statement, 5) the problems were in a special context where

one or more aspects were not specified, 6) in-between domain transfer capabilities were needed, 7) there was no execution program or algorithm available to solve the problem in a routine, and 8) solutions may not have been final, rather a plan was put in place to find out if the solution worked in reality, based on the implementation and evaluation. Problem solving in this case became an iterative process. In contrast, well-structured problems (WSP) could be specified by the following elements: 1) they had a well-defined initial state and goals, 2) they had a single correct answer, 3) all elements which were required for the solution were known, 4) problem solving required using rules and strategies like logical, algorithmic processes which ensured a correct answer, and 5) the current state of the problem could be consistently compared with the goal state. For mid-structured problems (MSP), the following definitions were adopted: 1) they had a defined initial state, 2) goals were known, but only as information, findings and data might be implicitly embedded in the problem and must be formulated and found by the individual, 3) required the use of a limited number of concepts, rules and principles, and 4) knowledge of skills of how to solve well-structured problems was needed (as a sort of “metacognition”).

The operationalization of the socio-economic efficiency could be accomplished by various constructs, especially since the choice of the efficiency dimensions is always related to the judgment of the observer. To measure the dependent latent endogenous variables, the socio-economic efficiency will be split into three dimensions: the formal efficiency, the material efficiency, and the personal efficiency (Neuert, 1987, p. 114). By definition, the decision-making process can be understood as a target-oriented process (target-output relationship) where the aim is to reach a future/target state. In this sense, the decision-making procedure with its various sub-processes can be seen as a formal instrument for solving problems by taking choices when selecting alternatives (Gzuk, 1975). The comparison between the initially intended goal fulfillment and the accomplished goal fulfillment can be described as “formal” efficiency. The level of formal efficiency can be determined by comparing the target or the desired outcomes with the actually “performed” outcomes. The material efficiency in decision-making relates to the economic results and can be mainly understood as an input-output relationship which is measured by criteria like profit, growth, rate of return, etc. Management science has created a series of key indicators to display the material efficiency in decision-making, exemplarily measured by the overall-economic indicator of time consumption. For the most part, these are measures which indicate economic activities as input-output relationships with performance indicators like profitability, cost and returns, or cost and benefits. The formal and the material efficiency deal with the hard facts and reflect the economic and more objective side by detectable and reproducible elements of decision-making. The personal (individual) efficiency reflects the socio-psychological and subjective part in decision-making and therefore deals with results which can be considered as soft facts and are related to the emotions, feelings, acceptance and satisfaction of the individual.

Empirical Design

The “code of good conduct” for social sciences, economics, and management research demanded not only the development of theories, theorems, and hypotheses but

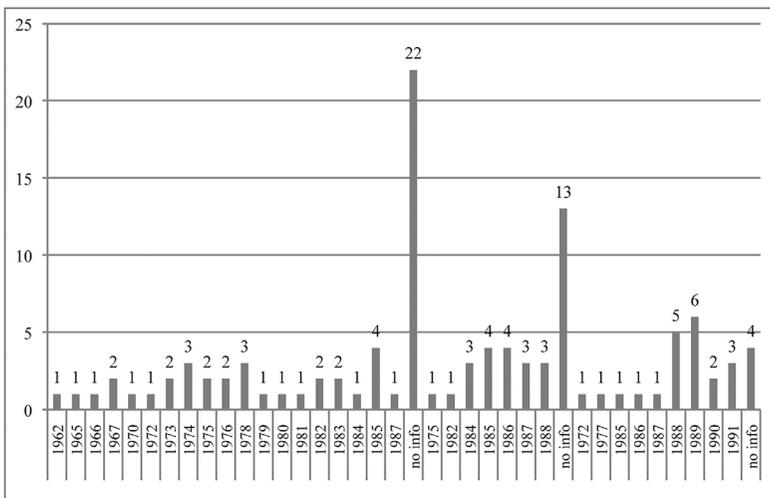
also a profound “scientific” effort to test the validity and robustness of the theoretical construct via empirical procedures and qualitative and/or quantitative analyses (Kirsch, Seidl, & van Aaken, 2007; Popper, 2005).

In order to test the theoretical outline and the set of hypotheses, it was suggested to design and apply the research method of a laboratory experiment. Laboratory experiments have been widely used for business, management, and economic research dealing with research questions referring to behavioral patterns and their respective explicable outcomes in decision-making processes (Abbink & Tietz, 2008).

Laboratory experiments provide the advantage that the empirical setting allows for the precise control of the formulated cause-effect variables by eliminating potential “interrupting” variables, which might appear in field studies or field experiments. On the other hand, the external validity of lab experimental findings is still an issue in major scientific disputes (Hussy, Schreier, & Echterhoff, 2010).

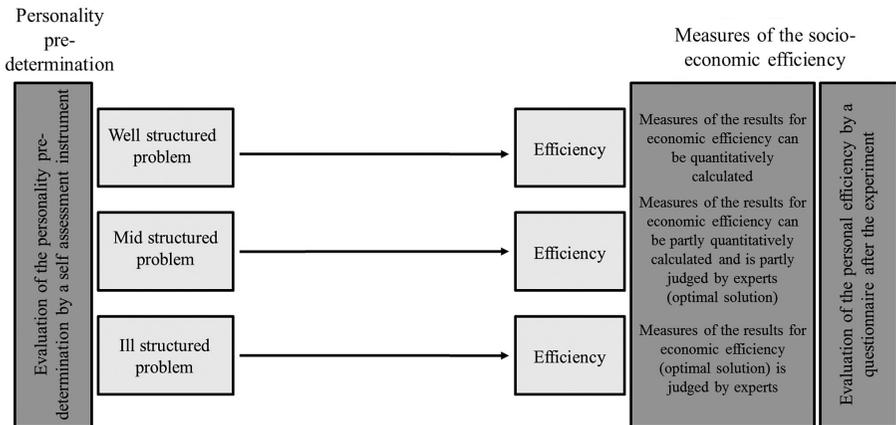
Sample experimentees should consist of graduate students in Master’s and/or doctoral programs with a professional background, and bachelor students with no professional background. Thus, one can make sure that the experimental sample is easily accessible and also includes students with an academic and a professional background as well, which will undoubtedly increase the previously mentioned external validity of the experimental findings (Bardsley et al., 2010). In this current study, 111 students participated in the empirical experiment. 32 of them were full time Master’s degree students in the field of International Management (MIM) with little professional background. Fifty-four of them were part-time doctoral students (PhD) in the field of Business Administration with a significant professional background, and 25 were full time Bachelor’s students (BIM) with no professional background (Figure 3). Forty-six of the participants were female, 57 were male, and 8 specified no gender information.

Figure 3: *Distribution of Age and Per Studies of the Experiments*



The assessment of the personality predetermination via the MBTI®, which also reflected the behavioral aspects of the hypotheses, was done before the laboratory experiment. This allowed the pre-selection of the participants in accordance with their personality/cognitive style (rational versus intuitive decision-making styles). Within the laboratory experiment, the participants received one out of three tasks with a given problem structure (well-, mid- or ill-structured problem) and were asked to solve the problem according to the description of the problem statement. The well-structured problem task was based on an investment decision-making problem, and gave the option to choose between three different options. This well-structured task could be solved quantitatively by a mathematical algorithm. The indicator for an “optimal” result would be a figure done by a calculation. The ill-structured problem task was about a decision-making situation of an imaginative and urgent (i.e., a crash on the moon) situation. The optimal result was determined by the judgment of experts. The mid-structured task, which could be characterized by having a part within the problem structure and determined by a calculation which might have no objectively correct solution, was addressed by a case study that referred to a decision-making process for a marketing strategy. In this case, the first part referred to a calculation on the financial impact of the marketing strategy. The second part was about ranking the plausibility of the different opinions of various managers regarding the marketing strategy. In this case, the first part of the task was evaluated by correctness of the calculation, and the second part evaluated by a judgment of experts. This allowed testing each one of the three problem structures with participants showing rational and/or intuitive decision-making styles (Figure 4).

Figure 4: Design of the Empirical Experiment



Source: Authors

According to the causal model (Figure 1), the time consumed to perform the decision-making tasks (as an indirect indicator for costs, assuming that “the longer it takes to come to a solution, the more costly it is”) would be the measurement of the variable to track the material efficiency dimension. Thus, the time consumption

to fulfill a certain task would provide information about the material efficiency. The formal efficiency was tracked by comparing the results of the various problem solutions of the participants with the optimal results. As the well-structured tasks, by definition, were tasks that could be solved quantitatively by a mathematical algorithm, the indicator for an optimal result for a well-structured problem task would be a correct figure done by a calculation. For the ill-structured tasks, whereby the problem constellation could not be calculated by a mathematical algorithm and might not provide an objective result, the optimal result was determined by the judgment of academic experts. For the mid-structured problem tasks, which were characterized by having a part within the problem structure and were determined by a calculation that might have no objective solution, the optimal result was a combination of both, a calculation of a figure, and a judgment of experts (Figure 4). The personal (individual) efficiency was tracked with a questionnaire after the participants finished their problem solving task. The questionnaire was chosen as a data gathering method for personal (individual) efficiency measurement which in this case were personal impressions (like satisfaction, self-reflection, etc.) which can be hard or almost impossible to track by simply observing participants in an experimental environment.

Experimental Findings

Based on the laboratory experiment treatments and the resulting data sets, the following statistical procedures were conducted:

- 1) Computation of means, means distribution and relative frequencies of the overall efficiencies measures in the various decision task structures (well-, mid- and ill-structured tasks)
- 2) Correlation analyses between various personality trait measures of the experimentees and the decision making efficiency measures in the various decision-making task structures
- 3) Chi-square-test procedure in order to examine whether decision-making efficiency was either equally distributed among intuitive and rational decision maker or not

The statistical analysis outcomes could be outlined by the following general experimental finding: when solving well-structured problem tasks, the empirical data supported the fact that Thinking types (Figure 5) achieved higher “material” efficiencies than Feeling types. However, Judging types (Figure 6) achieved a higher “formal” efficiency than Perceiving types.

Thinking and Judging types perceived themselves as working more systematically and were more comfortable when solving well-structured problem tasks than Feeling and Perceiving types. This was also in line with the findings of Briggs Myers et al. (2003). They described Thinking/Judging types as logical decision makers whose goal was to impose a logical organizational structure to problems in order to solve them most efficiently. Since there was a significant relationship between the material efficiency and the rational-oriented Thinking types, Hypothesis 3 and Hypothesis 4 can tentatively be substantiated.

Figure 5: Chi-square-test of T-F Types and Time 1

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	47,199 ^a	32	,041
Likelihood-Ratio	25,160	32	,800
Linear-by-Linear Association	5,009	1	,025
No. of Valid Cases	109		

Figure 6: Chi-square-test of J-P Types and Task 1

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24,627 ^a	10	,006
Likelihood-Ratio	23,020	10	,011
Linear-by-Linear Association	3,374	1	,066
No. of Valid Cases	109		

As for ill-structured problem tasks, the empirical data supported no significant results, and there seemed to be no evidence that intuitive oriented types achieved higher efficiency when solving ill-structured problem tasks than rational orientated types. So in this case, the empirical data did not provide substantive results to support H_{01} and H_{05} .

For solving mid-structured problem tasks, the empirical data from the conducted correlation analysis, the mean distributions, and the chi-square-tests provided no significant difference in efficiency measurement between the rational-oriented types (Sensing/Thinking) and the intuitive-oriented types (Intuition/Feeling). So in this case, the data did not provide substantive results to confirm H_{02} tentatively. Complimentary intuitive and rational personality types, however, (ENTJ, INTP and ESTJ) seemed to achieve significantly higher overall efficiencies (Figure 7) when solving problem tasks.

Generally, it can be stated that there was no sustainable empirical substantiation allowing for the existence of concise “linear” functions between rational/intuitive reasoning and decision-making performance. However, there seemed to be a perceivable relation between intuitive versus rational personality traits and the degree of self-satisfaction with the decision maker’s performance in well-, mid- and ill-structured tasks.

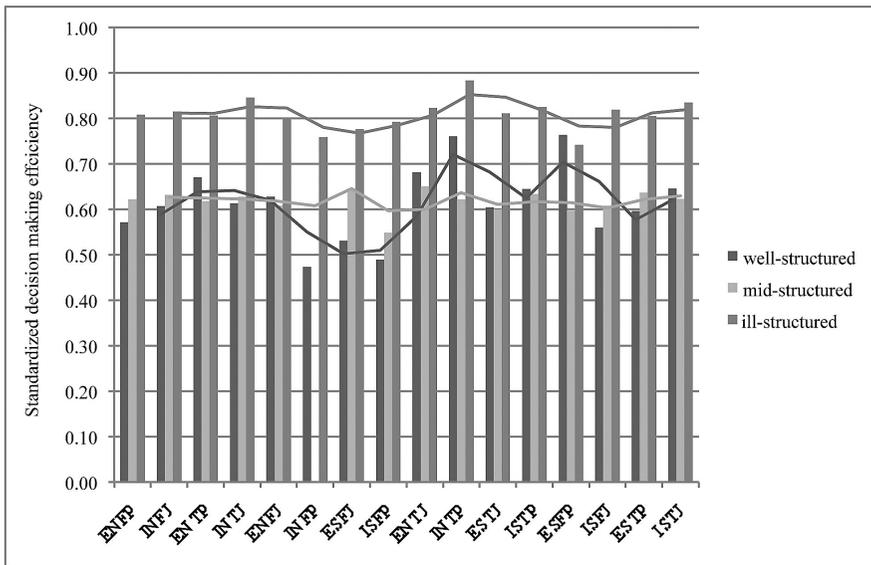
Tentatively the following findings and conclusions can be summarized:

- 1) The statistical procedures of a correlation analysis (Weiber & Mühlhaus, 2010) and chi-square-test were conducted in order to find out whether there was any relationship between the degree of intuition response rationality (as the independent variable) and the task fulfillment efficiency (as the dependent variable), response, where the expected distribution of task

fulfillment varied between more intuitive decision makers and more rational decision makers.

- 2) Generally, there were some significant results in the correlation analysis. However, very weak relationships existed between the various degrees of the intuition/rationality indicators and the decision-making efficiency degrees in well-structured, mid-structured and ill-structured decision-making tasks, indicating that overall the hypotheses could be substantiated, although rational types seemed to achieve tangentially higher decision-making efficiency outcomes within well-structured problem tasks than intuitive types.
- 3) In particular, former research findings (Neuert, 1987) seemed to corroborate that the “highest” degrees of decision-making efficiency could be achieved by a “pertinent blend” (Figure 7) of intuitive and rational personality traits in general, especially when in regards to complex strategic decision-making issues.

Figure 7: *The Arithmetic Means of Decision-Making Efficiency Measures Among the 16 MBTI Types*



From an application orientated point of view, the desire for higher decision-making efficiency could lead organizations to compose decision-making teams with an appropriate mixture of more “intuitive” and more “rational” members. This would then “design” the decision process as a “pertinent blend” of the expertise of both; more intuitive and more rational decision-making.

Finally, more research needs to be conducted on the interdependencies of structural elements in decision-making processes (goals, procedures, sanctions, risks, etc.) and on the individual/personal “design” of the decision makers (personality traits, motivation, psychological predetermination, group dynamics, etc.).

References

- Abbinck, K., & Tietz, R. (2008). Experimental economics in Germany, Austria, and Switzerland: A collection of papers in honor of Reinhard Tietz. *Hg. v. Abdolkarim Sadrieh*. Marburg: Metropolis-Verl.
- Agor, W. H. (1986). How top executives use their intuition to make important decisions. *Business Horizons*, 29, 49–53.
- Allinson, C. W., & Hayes, J. (1996). The cognitive style index: A Measure of intuition-analysis for organizational research. *Journal of Management Studies*, 33(1), 119–135.
- Appelt, K. C., Milch, K. F., Handgraaf, M. J. J., & Weber, E. U. (2011). The decision-making individual differences inventory and guidelines for the study of individual differences in judgment and decision making research. *Judgment and Decision Making*, 6(3), 252–262.
- Bardsley, N., Cubitt, R., Moffatt, P., Loomes, G., Starmer, C., & Sugden, R. (2010). *Experimental economics: Rethinking the rules*. Princeton: Princeton University Press.
- Briggs Myers, I., McCaulley, M. H., Qenk, N. L., & Hammer, A. L. (2003). *MBTI manual. A guide to the development and use of the Myers-Briggs type indicator* (3rd ed.). Palo Alto, CA: CPP, Inc.
- Bronner, R. (1973). *Entscheidung unter Zeitdruck*. Tübingen, Germany: J.C.B. Mohr.
- Cacioppo, J. T., & Petty, R. E. (1982). The need for cognition. *Journal of Personality & Social Psychology*, 42(1), 116–131.
- Curtis, R. C. (Ed.) (1991). *The relational self. Theoretical convergences in psychoanalysis and social psychology*. New York: Guilford Press.
- Dane, E., & Pratt, M. G. (2007). Exploring intuition and its role in managerial decision making. *Academy of Management Review*, 32(1), 33–54.
- Dijksterhuis, A., Bos, M. W., Nordgren, L.F., & van Baaren, R. B. (2006). On making the right choice: The deliberation-without-attention effect. *Science*, 311, 1005–1007.
- Epstein, S. (1991). Cognitive-experiential self-theory: An integrative theory of personality. In R. C. Curtis (Ed.), *The Relational self: Theoretical convergences in psychoanalysis and social psychology* (pp. 111-137). New York: Guilford Press.
- Epstein, S. (2003). Cognitive-experiential self-theory of personality. In I. B. Weiner (Ed.), *Handbook of psychology* (pp. 159-184). Hoboken, NJ: Wiley.
- Feger, H. (1975). Zum gegenwärtigen Stand der psychologischen Entscheidungsforschung. In H. Brandstätter (Ed.), *Entscheidungsforschung* (pp. 15-50). Tübingen, Germany: J.C.B. Mohr.
- Fields, A. F. (2001). A study of intuition in decision-making using organizational engineering methodology (Thesis, Nova Southeastern University, Florida). Retrieved from Organizational Engineering Institute database: http://www.oeinstitute.org/dissertation/Ashley_Fields_dissertation.pdf
- Fredrickson, J. W. (1986). The strategic decision process and organizational structure. *Academy of Management Review*, 11(2), 280–297.
- Furnham, A., Moutafi, J., & Crump, J. (2003). The relationship between the revised NEO-Personality Inventory and the Myers-Briggs Type Indicator. *Social Behavior and Personality*, 31(6), 577–584.
- Gzok, R. (1975). *Messung der Effizienz von Entscheidungen*. Tübingen, Germany: J.C.B. Mohr.

- Hauschildt, J., Gmünden, H. G., Grotz-Martin, S., & Haidle, U. (1983). *Entscheidungen der Geschäftsführung. Typologie, Informationsverhalten, Effizienz*. Tübingen, Germany: J.C.B. Mohr.
- Hodgkinson, G.P., Langan-Fox, J., & Sadler-Smith, E. (2008). Intuition: A fundamental bridging construct in the behavioral sciences. *British Journal of Psychology*, 99, 1–27.
- Hough, J.R., & Ogilvie, D. (2005). An empirical test of cognitive style and strategic decision outcomes. *Journal Management Studies*, 42(2), 417–448.
- Hussy, W., Schreier, M., & Echterhoff, G. (2010). *Forschungsmethoden in psychologie und sozialwissenschaften - für bachelor*. Berlin, Heidelberg: Springer.
- Jung, C. G. (1971). *Psychological types*. London: Routledge.
- Kahneman, D. (2012). *Thinking, fast and slow*. London: Penguin Books
- Kirsch, W., Seidl, D., & van Aaken, D. (2007). *Betriebswirtschaftliche forschung. wissenschaftstheoretische grundlagen und anwendungsorientierung*. Stuttgart, Germany: Schäffer-Poeschel.
- Langan-Fox, J., & Shirley, D. A. (2003). The nature and measurement of intuition: Cognitive and behavioral interests, personality, and experiences. *Creativity Research Journal*, 15, 207–222.
- McCrae, R.R., & Costa, P.T. (1989). Reinterpreting the Myers-Briggs type indicator from the perspective of the five-factor model of personality. *Journal of Personality & Social Psychology*, 57, 17–37.
- Mintzberg, H. (1994, January - February). The fall and rise of strategic planning. *Harvard Business Review*, 105–114.
- Neuert, J. O. (1987). Planungsgrade. *Eine experimentelle untersuchung zum zusammenhang zwischen planungsverhalten und planungserfolg*. Spardorf, Germany: Rene F Wilfer.
- Neuert, J. O. (2010). The impact of intuitive and discursive behavioral patterns on decision-making outcomes: Some conjectures and empirical findings. Paper presented at the WDSI Annual Conference Readings, Lake Tahoe, CA.
- Neuert, J., & Hoeckel, C. (2013). The impact of personality traits and problem structures on management decision-making outcomes. *Journal of Modern Accounting and Auditing*, 9(3), 382-393.
- Pacini, R., & Epstein, S. (1999). The relation of rational and experiential information processing styles to personality, basic beliefs, and the ratio-bias phenomenon. *Journal of Personality and Social Psychology*, 76(6), 972–987.
- Popper, K. R. (2005). *Logik der forschung*. Tübingen, Germany: Mohr Siebeck.
- Pretz, J. E., & Totz, K.S. (2007). Measuring individual differences in affective, heuristic, and holistic intuition. *Personality and Individual Differences*, 43, 1247–1257.
- Ritchie, W. J., Kolodinsky, R. W., & Eastwood, K. (2007). Does executive intuition matter? An empirical analysis of its relationship with nonprofit organization financial performance. *Nonprofit and Voluntary Sector Quarterly*, 36(1), 140–155.
- Sarmany-Schuller, I. (2010). Decision-making under time pressure in regard to preferred cognitive style (analytical-intuitive) and study orientation. *Studia Psychologica*, 52(4), 285–290.
- Sauter, V.L. (1999). Intuitive decision-making. *Communications of the ACM*, 42(6), 109–115.
- Shapiro, S., & Spence, M.T. (1997). Managerial intuition: A conceptual and operational

- framework. *Business Horizons*, 40(1), 63–68.
- Shiloh, S., Salton, E., & Sharabi, D. (2002). Individual differences in rational and intuitive thinking styles as predictors of heuristic responses and framing effects. *Personality and Individual Differences*, 32, 415–429.
- Simon, H. A. (1997). *Administrative behavior: A study of decision-making processes in administrative organizations* (4th ed). New York: Free Press.
- Sinclair, M., & Ashkanasy, N.M. (2002). Intuitive decision-making amongst leaders: More than just shooting from the hip. *Mt Eliza Business Review*, 1–17.
- Van Riel, A. C. R., Ouwersloot, H., & Lemmink, J. (2006). Antecedents of effective decision-making: A cognitive approach. *The IUP Journal of Managerial Economics*, 6(4), 7–28.
- Weiber, R., & Mühlhaus, D. (2010). *Strukturgleichungsmodellierung. Eine anwendungsorientierte Einführung in die Kausalanalyse mit Hilfe von AMOS, SmartPLS und SPSS*. Heidelberg, Germany: Springer (Springer-Lehrbuch).
- Weiner, I. B. (Ed.) (2003). *Handbook of psychology*. Hoboken, NJ: Wiley.
- Westcott, M. R. (1968). *Toward a contemporary psychology of intuition: A historical, theoretical, and empirical Inquiry*. New York: Holt, Rinehart and Winston, Inc.
- Witte, E. (Ed.) (1988). *Innovative Entscheidungsprozesse. Die Ergebnisse des Projektes "Columbus"*. Tübingen, Germany: J.C.B. Mohr.
- Woolhouse, L.S., & Bayne, R. (2000). Personality and the use of intuition: Individual differences in strategy and performance on an implicit learning task. *European Journal of Personality*, 14, 157–169.

Appendix

Correlations			MBTI types 1-16	R ²
formal efficiency well-structured	Task 1 (0-10)	Korrelationskoeffizient Sig. (2-seitig) N	,093 ,336 109	-
material efficiency well-structured	Time 1	Korrelationskoeffizient Sig. (2-seitig) N	,005 ,961 109	-
formal efficiency mid-structured	Task 2 (0-10)	Korrelationskoeffizient Sig. (2-seitig) N	-,031 ,760 100	-
material efficiency mid-structured	Time 2	Korrelationskoeffizient Sig. (2-seitig) N	-,053 ,600 99	-
formal efficiency ill-structured	Task 3 (0-10)	Korrelationskoeffizient Sig. (2-seitig) N	-,044 ,652 106	-
material efficiency ill-structured	Time 3	Korrelationskoeffizient Sig. (2-seitig) N	,192* ,047 107	,037
individual efficiency well-structured	PE1	Korrelationskoeffizient Sig. (2-seitig) N	-,186 ,053 109	,035
total efficiency well-structured	Total1	Korrelationskoeffizient Sig. (2-seitig) N	,068 ,483 109	-
individual efficiency mid-structured	PE2	Korrelationskoeffizient Sig. (2-seitig) N	,015 ,887 98	-
total efficiency mid-structured	Total2	Korrelationskoeffizient Sig. (2-seitig) N	,006 ,950 98	-
individual efficiency ill-structured	PE3	Korrelationskoeffizient Sig. (2-seitig) N	-,027 ,782 106	-
total efficiency ill-structured	Total3	Korrelationskoeffizient Sig. (2-seitig) N	-,025 ,798 106	-

*p<0.05. **p<0.01

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