

Attachment, Relationship Quality and Stressful Life Events: A Theoretical Meta-Perspective and Some Preliminary Results

Apego, Calidad de la Relación y Sucesos Vitales Estresantes: Una Meta-Perspectiva Teórica y Algunos Resultados Preliminares

Gidi Rubinstein
Netanya Academic College

Aharon Tziner
Netanya Academic College

Miriam Bilig
Ariel University Center

Abstract. Attachment theory has inspired an explosion of research on personality development, close relationships, and the complex interplay between individual and relationship processes in all phases of the lifespan. In recent years, the theory has been extended to organizational settings. Over three decades of attachment research has been applied to people's attitudes, performance, and social relationships within large organizations, such as the workplace, the army, and community groups. The present paper aims to advance an integrative perspective that would bridge the psychological and sociological aspects of attachment.

Keywords: attachment, organizations, personality, relationship quality, stressful-life events.

Resumen. La teoría del apego ha inspirado una explosión de investigación sobre el desarrollo de la personalidad, las relaciones íntimas y el complejo interjuego entre los procesos individuales y de relaciones en todas las fases de la vida. En los últimos años, la teoría ha sido ampliada al ámbito organizacional. A lo largo de tres décadas, la investigación sobre apego ha sido aplicada a las actitudes personales, el desempeño y las relaciones sociales en grandes organizaciones laborales, el ejército y grupos comunitarios. El presente artículo propone una perspectiva integrativa que uniría los aspectos psicológicos y sociológicos del apego.

Palabras clave: apego, organizaciones, personalidad, relaciones interpersonales, sucesos estresantes.

Individual differences in attachment security, and in kinds of insecurity (anxiety and avoidance), are associated with group- and organization-related cognitions, emotions, behaviors, patterns of leadership, leader-follower relationships, organizational citizenship, organizational commitment, and resistance to organizational change. Moreover, cohesive groups and socialized, transformational leaders tend to function as symbolic attachment figures, bolstering members' and followers' senses of safety, security, and permanence, activating and supporting a broaden-and-build cycle of attachment security, and facilitating personal and organizational effectiveness and personal growth (Mikulincer & Shaver, 2007). When commitment is described in general terms, the word "attachment" is often invoked; however, there is a distinct literature dealing with this term in clinical, developmental, and social psychology that has largely been ignored in organizational research. In these fields, an attachment is the bond emanating from an individual toward another, based on experiences with the other and in expectations of security and comfort the other can pro-

vide. When individuals approach organizational relationships with avoidant cognitions, for instance, they may act in ways that encourage them to be perceived as less valuable organizational members, such as avoiding discretionary events or avoiding helping others, because the individual would not want to get too close to the organization or to the people in it. If the organization is forced to lay off employees, insecurely attached individuals who have failed to enact discretionary and citizenship behaviors, would be more likely to be let go, thus fulfilling their own expectations and further fortifying their attachment orientations (Bergman, Benzer, & Henning, 2009). General pair bonding is driven by two of the most powerful forces of human behavior - sexual attraction and selective social attachments. The psychology of attachment and attachment styles, at first as caregiver-infant bonding, as male-female bonding, has been investigated extensively (Bell & Richard, 2000; Konner, 2004; Reizer, 2004).

Attachment theory is grounded in Bowlby's (1969, 1973, 1980) work, which showed the critical importance of the child-caregiver bond to individual development. According to Bowlby's (1969, 1973) theory, the reactions of significant others to one's own needs at times of stress has crucial implications on mental

Correspondence on this article should be sent to Aharon Tziner, Schools of Behavioral Studies and Business Administration, Netanya Academic College, Jerusalem, Israel. E-mail: atziner@netanya.ac.il

health, affect regulation, and interpersonal relations. In Bowlby's (1973) view, interactions with significant others who are available and responsive to one's needs, promote a sense of attachment security. Attachment security comprises positive representations ("working models") of the self and others, as well as the belief that maintaining proximity to significant others is an effective affect regulation device (Bowlby, 1973). In contrast, interactions with significant others who are unavailable and unresponsive to one's needs elicit insecurities regarding the responses of others, one's own value, and the effectiveness of proximity-seeking strategies. In the past two decades, several studies have examined the connection between the chronic and global sense of attachment security and responses to the needs of a close partner. Thus, attachment research has shown that attachment representations significantly contribute to subjective well-being, affect-regulation, high self-esteem, positive person perception, and well-adjusted interpersonal cognitions and behaviors (see Mikulincer & Florian, 2001, for a review).

Consistent with Bowlby's argument, attachment plays a crucial role throughout the life span of adult relationships, including marriage and kinship bonds (Ainsworth, 1989). On this basis, a large body of research attests to the importance of individual differences in adult attachment styles as a predictor of processes and outcomes in couple relationships. Secure individuals report less conflict, greater acceptance of their partners, more interdependence, more constructive ways of coping with stress, and more satisfying and stable relationships (Feeney, 1999). Those high on relationship anxiety show particularly high levels of conflict in their relationships (Feeney, Noller, & Roberts, 2000). Meanwhile, the influence of the caregiving system on intimate relationships has been neglected.

Caregiving is a major component of attachment and presumably of critical importance to the stability of the male-female relationship. However, from the evolutionary perspective, caregiving in intimate relationships has not been sufficiently explored (Collins & Feeney, 2000; Feeney & Collins, 2001). The caregiving system was first conceptualized by Bowlby (1980) as a group of behaviors aimed at supporting and offering comfort and reassurance to a closely related person, providing a secure basis and encouraging autonomy (Bowlby, 1982, 1988; Kuncie & Shaver, 1994). In spite of considerable attention devoted to the evolutionary, functional, developmental and pathological aspects of attachment, attempts to account for the internal operation or the structure of caregiving have been rare (Bell & Richard, 2000; George & Solomon 1996, 1999). Kuncie and Shaver (1994) were the first to identify the links between attachment styles and caregiving patterns in intimate adult relationships; however, their individual differences in caregiving, based on attachment dimensions, did not separate conceptually and methodologically between attachment and care-

giving representations. Reizer (2004) developed a new questionnaire, which identifies the representations of self and others in caregiving, and aims at studying the caregiving system (separate from attachment conceptualization).

Place attachment

Several researchers have studied place attachment, but opinions differ in the literature as to its precise meaning, content and definition. Numerous researchers adopted a cultural point of view, emphasizing the symbolic attachment of the individual or group to a certain place (Giuliani & Feldman, 1993; Low, 1992; Mesch & Manor, 1998). The majority of researchers attribute place attachment to psychological factors, including emotions, cognition, and experiences that cause a person or group of persons to feel attached to a certain place. Bowlby (1973) states that every person occupies a unique personal environment that serves as an "outer ring" of life-sustaining systems complementary to the "inner ring" of systems that maintain physiological homeostasis. Since a person's safety and security depends on this larger personal environment, a threat to it is best understood as a threat to the self. The "outer ring" is interpreted as synonymous to "place." Fullilove (1996) deals with the psychology of place, stating that individuals require a "good enough" environment in which to live. They require a sense of belonging, necessary for their psychological well-being, which depends on strong, well-developed relationships with their environment. Place attachment, which is analogous to, but distinct from, attachment to persons, is a mutual care-taking bond between a person and a beloved place.

Some researchers emphasize that behavioral activity such as social involvement, significantly affects the development of place attachment (Harris, Brown & Werner, 1996). Gustafson (2001) claims that in this age of postmodernism and the global village, a different relationship has developed between place attachment and mobility. Although marital relationships have been extensively studied, their relation to place attachment has been virtually unexplored, to the best of our knowledge.

One of the limitations in the study of attachment to place has been its restriction to the limited range of neighborhood. Apart from some studies that analyze attachment to house, there is a gap regarding other spatial environments. In this sense, we do not know to what extent people can be attached to other spatial categories, i.e., to bigger or smaller places, and whether the neighborhood range is effectively the basic level of attachment, as many studies assume. On the other hand, most studies on attachment to place have viewed places as social environments only. Hidalgo and Hernandez (2001) measured place attachment within

three spatial ranges (house, neighborhood, and city) and two dimensions (physical and social), in order to establish some comparison between them. They conducted this study by interviewing 177 people from different areas of Santa Cruz de Tenerife (Spain). The results indicate that attachment to place develops to different degrees within different spatial ranges and dimensions. They also found that: 1) attachment to neighborhood is the weakest; 2) social attachment is greater than physical attachment; and 3) the degree of attachment varies with age and gender.

Attachment in an Organizational Context

Team cohesiveness refers to the forces that bind members to one another and to their group (Guzzo & Shea, 1992). Attachment researchers do not seem to have systematically examined attachment style differences in organizational attitudes and behaviors (Mikulincer & Shaver, 2007). It seems reasonable to assume that when members develop stronger interpersonal bonds and greater identification with the team goals and values, i.e., high team cohesion, the team would be more effective. Indeed, interpersonal relationships that involve openness, support, and help, which are typical of high social cohesion, are likely to induce strong norms that promote high performance. Furthermore, insofar as members like the team and wish to remain part of it, they either develop an inner drive to contribute to the achievement of team's goals or they respond to the external pressure exerted upon them by other teammates to do so (Tziner, 2002; Tziner, Nicola, & Rizac, 2003). Social cohesion generates both the necessary conditions for superior performance, for example, mutual support and help, and the mechanism required to exert effective pressure on team members to perform well and exhibit OCB. The affective bonds (Ilies, Wagner & Morgerson, 2007) that underlie socio-emotional cohesiveness may help shield the team from adverse factors such as stress (Haslem & Reicher, 2006). However, insufficient empirical work has been carried out to measure the impact of stress on the relationship between team cohesiveness (particularly, instrumental cohesiveness) and team performance and behavior (OCB=organizational citizenship behavior, Organ, 1990) in real organizational settings. Based on a meta-analysis of studies examining the structure of the OCB construct, LePine, Erez and Johnson (2002) concluded that it reflects a broad prosocial orientation manifested in five kinds of organizational behavior: cooperative and helpful behavior toward other organization members ("altruism"), inhibition of proclivities and behaviors that might damage organizational efforts and interfere with the accomplishment of organizational tasks ("conscientiousness"), not complaining about mundane organizational issues ("sportsmanship"), respect for other

organization members' needs and rights ("courtesy"), and personal involvement in matters of concern for the organization ("civic virtue").

Attachment in a Cross-Cultural Context

The three basic attachment patterns -avoidant, secure, and ambivalent -seem to be found in every culture in which attachment studies have been conducted. Cross-cultural studies on attachment require major investments on the part of the researchers. Their central question is whether attachment theory is merely a middle-class Western invention with no relevance to other cultures, or whether its universalist perspective can be confirmed in non-Western childrearing circumstances. They have not refuted the bold conjectures of attachment theory about the universality and normativity of attachment and about its antecedents and sequels. In fact, taken as a whole, the studies are remarkably consistent with the theory. Attachment theory may therefore claim cross-cultural validity, but contextual components are needed. To provide an example from a study of gender and sexual orientation in Israel, we found that attachment patterns among couples of gay men and lesbian women might be strongly influenced by social attitudes and prejudices toward homosexuality and gender roles; hence results of American and Israeli samples, for example, may differ significantly. Moreover, the cumulated body of knowledge shows that cultural differences preclude automatic transfer of findings from one culture to another. Therefore, it is imperative to explore to what extent effects unearthed with Israeli participants hold with subjects of a different cultural milieu.

Moreover, attachment theory may be construed as a framework for investigating adult romantic relationships (e.g., Mikulincer & Shaver, 2007). Research has shown not only that romantic love may be conceptualized as part of an attachment related process, but that many aspects of relationship functioning can be reliably predicted by differences in how individuals internally represent their attachment relationships (Mohr, 2008). Bowlby's (1969,1982) discussion of homosexuality was based on his understanding of evolutionary theory, which was not informed by the currently accepted notion that evolutionary success is focused on the survival of the gene (Kirpatric, 1998). Evolutionary theorists have described possible scenarios wherein homosexuality may contribute to reproductive fitness even when lesbians and gay men do not have children themselves (Mohr, 2008). Little empirical work on same-gender romantic relationships has been conducted from a perspective that is explicitly grounded in attachment theory. However, Ridge, and Feeney (1988) collected data related to attachment, romantic and sexual relationships from individuals associated with LGB organizations at colleges and uni-

versities in Australia, the results of which were consistent with findings based on heterosexual samples, adding to the considerable evidence that same-gender couples and heterosexual couples function similarly (Kurdek, 2005). There is also evidence that more secure gay and lesbian individuals hold more positive attitudes toward their homosexuality (e.g., Elizur & Mintzer, 2003; Jellison & McConnell, 2003; Mohr & Fassinger, 2003). Welles and Hansen (2003) found that ratings of secure attachment were associated with less internalized shame and higher integration of private and public aspects of lesbian identity. In contrast, high ratings of either anxiety or avoidance were associated with higher levels of shame and more diffusion of lesbian identity. In another study (Diamond & Dube, 2002) found that attachment strength was lower in romantic relationships with two men and higher in relationships with two women, a finding which was explained as the result of restrictive male gender-role norms. The tendency of men to seek sensation more than women, and of women to seek security and stability in relationships has become a classical and consistent finding (e.g., Zuckerman, 2008). The study of attachment among lesbian women and gay men provides a unique opportunity to investigate what happens when two men or two women share their lives.

Preliminary Results

Preliminary data examining the relationship between attachment, relationship quality and stressful life events among people living in high and low risk

areas using the correlational method, suggest a significant connection between mental representation of caregiving and attachment and marital quality. Furthermore, we detected association of stressful events with perception of the quality in the relationship (Tables 1 and 2).

Discussion

The present paper aims to advance an integrative perspective that would bridge the psychological and sociological aspects of attachment. We reviewed that literature and presented some preliminary findings about the relationship between attachment, relationship quality and stressful life events among people living in high and low risk areas. The reviewed studies, as well as our preliminary findings, show that attachment is applicable to most, if not all, fields of human relationships, and that from an ecological perspective, also to places. Although originally developed with respect to the relationship between mothers and newborns, attachment theory, including attachment styles, is relevant and applicable to relationships among adults, whether heterosexual or homosexual couples, family relationships, organizations, or even places. This study attempted to cover all these fields in the unique cultural setting of Israel, ranging from right-wing religious settlements to gay and lesbian metropolitan couples, usually identified with leftist and liberal political attitudes and living in Tel-Aviv. Cross-cultural studies were suggested to further validate the attachment theory across different societies and cultures. This has

Table 1. Regression table for predicting marital satisfaction by stress measurements and mental representations of caregiving and attachment

Predictor Variable	Husband-marital satisfaction		Wife-marital satisfaction	
	r	β	r	β
<i>Stage 1</i>				
Anxiety-attachment	-.44***	-.27**	-.33***	-.13
Avoidance- attachment	-.30***	-.20*	-.27**	-.13
Anxiety- caregiving	-.42***	-.24**	-.27**	-.18*
Avoidance- caregiving	-.19*	-.00	-.31***	-.22**
R ²		.28***		.20***
<i>Stage 2</i>				
Anxiety-attachment	-.44***	-.06	-.33***	-.13
Avoidance- attachment	-.30***	.07	-.27**	-.01
Anxiety- caregiving	-.42***	.14*	-.27**	-.16*
Avoidance- caregiving	-.19*	.06	-.31***	-.07
Area of residence	.10	.05	.03	-.06
Distress response	-.65***	-.53***	-.50***	-.37***
Uncertainty regarding government plans	.10	.04	-.02	-.10
Uncertainty regarding future personal response	-.36***	-.22**	-.13*	-.02
Uncertainty regarding future support	-.23**	-.19**	-.34***	-.34***
R ²		.56***		.42***

* $p < .05$ ** $p < .01$ *** $p < .001$

Note. The sample consisted of 143 couples.

Table 2. Regression table for predicting marital conflicts by stress measurements and mental representations of caregiving and attachment

Predictor Variable	Husband-marital conflicts		Wives-marital conflicts	
	r	β	r	β
<i>Stage 1</i>				
Anxiety-attachment	.30***	.31***	.30***	.21**
Avoidance- attachment	-.11	.08	.22**	.04
Anxiety- caregiving	.16*	.02	.07	.05
Avoidance- caregiving	.02	.09	.32***	.25***
R ²		.10**		.15***
<i>Stage 2</i>				
Anxiety-attachment	.30***	.14	.30***	.24***
Avoidance- attachment	.11	.03	.22**	.04
Anxiety- caregiving	.16*	.07	.07	.07
Avoidance- caregiving	.02	.13	.32***	.12
Area of residence	.12	.15*	.05	.13*
Distress response	.38***	.32**	.36***	.26**
Uncertainty regarding government plans	-.15*	-.15*	-.18*	-.29***
Uncertainty regarding future personal response	.30***	.26**	.15*	.06
Uncertainty regarding future support	.07	.03	.27***	.25***
R ²		.27***		.35***

* $p < .05$ ** $p < .01$ *** $p < .001$

Note. Stress variables and mental representations contributed significantly and uniquely to predicting marital conflicts $F(9,125) = 5.07, p < .001$, explaining 27% of the variance among husbands, and $F(9,129) = 6.98, p < .001$, explaining 33% of the variance among wives.

been done with regard to specific issues, whereas we suggest carrying out such cross-cultural studies in a multi-dimensional perspective, which would include the different fields of life presented in this paper.

References

- Ainsworth, M. D. (1989). Attachments beyond infancy. *American Psychologist, 44*, 709-716.
- Bell, D. C., & Richard, A. J. (2000). The Search for a caregiving motivation. *Psychological Inquiry, 11*, 124-128.
- Bergman, M. E., Benzer, J. K., & Henning, J. B. (2009). The Role of Individual Differences. In H. J. Klein, T. E. Becker, & J. P. Meyer (Eds.), *Commitment in organizations: Accumulated wisdom and new directions* (pp. 229-235). NY: Routledge.
- Bowlby, J. (1982). *Attachment and Loss: Vol. 1. Attachment*. NY: Basic Books. (Original work published 1969).
- Bowlby, J. (1973). *Attachment and Loss: Separation, anxiety and anger*. NY: Basic Books.
- Bowlby, J. (1980). *Attachment and Loss: Vol. 3. Loss*. NY: Basic Books.
- Bowlby, J. (1988). *A Secure Base*. NY: Basic Books.
- Collins, N. L., & Feeney, B. C. (2000). A safe haven: an attachment theory perspective on support seeking and caregiving in intimate relationships. *Journal of Personality and Social Psychology, 78*, 1053-1073.
- Diamond, L. M., & Dube, E. M. (2002). Friendship and attachment among heterosexual and sexual-minority youths: Does the gender of your friend matter? *Journal of Youth and Adolescence, 31*, 155-166.
- Elizur, Y., & Mintzer, A. (2003). Gay males' intimate relationship quality: The roles of attachment security, gay identity, social support, and income. *Personal Relationships, 10*, 411-435.
- Feeney, B. C., & Collins, N. L. (2001). Predictors of caregiving in adult intimate relationships: an attachment theoretical perspective. *Journal of Personality and Social Psychology, 80*, 972-994.
- Feeney, J. A. (1999). Adult romantic attachment and couple relationships. In J. Cassidy and P. R. Shaver (Eds.), *Handbook of Attachment: Theory, research and clinical applications* (pp. 355-377). NY: Guilford.
- Feeney, J. A., Noller, P., & Roberts, N. (2000). Attachment and close relationships. In C. Hendrick and S.S. Hendrick (Eds.), *Close relationships: A sourcebook* (pp. 185-201). Thousand Oaks, CA: Sage.
- Fullilove, M. T. (1996). Psychiatric implications of displacement: Contributions from the psychology of place. *American Journal of Psychiatry, 153*, 1516-1523.
- George, C. & Solomon, J. (1996). Representational models of relationships: Links between caregiving and attachment. *Infant Mental Health Journal, 17*, 198-216.
- George, C., & Solomon, J. (1999). Attachment and caregiving: The caregiving behavioral system. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of Attachment: Theory, research and clinical applications* (pp. 649-670). NY: Guilford.
- Giuliani, M. V., & Feldman, R. (1993). Place attachment in a developmental and cultural context. *Journal of Environmental Psychology, 13*, 267-274.
- Gustafson, P. (2001). Roots and routes: Exploring the relationship between place attachment and mobility. *Environment and Behavior, 5*, 667-686.
- Guzzo, R. A., & Shea, G. P. (1992). Group performance and

- interpersonal group relationships in organizations. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of Industrial and Organizational Psychology, Vol 3.* (pp. 269-313). Palo Alto, CA: Consulting Psychologist Press.
- Harris, P. B., Brown, B. B., & Werner, C. M. (1996). Privacy regulations and place attachment: Predicting attachment to a student family housing facility. *Journal of Environmental Psychology, 16*, 287-301.
- Haslem, A. S., & Reicher, S. (2006). Stressing the group: Social identity and the folding dynamics of responses to stress. *Journal of Applied Psychology, 91*, 1037-1052.
- Hidalgo, M. C., & Hernandez, B. (2001). Place attachment: Conceptual and empirical questions. *Journal of Environmental Psychology, 21*, 273-281.
- Ilies, R., Wagner, D. T., & Morgeson, F. P. (2007). Explaining affective linkages in teams. *Journal of Applied Psychology, 92*, 1140-1148.
- Jellison, W. A., & McConnell, A. R. (2003). The mediating effects of attitudes toward homosexuality between secure attachment and disclosure outcomes among gay men. *Journal of Homosexuality, 46*, 159-177.
- Kirpatrick, L. A. (1998). Evolution, pair-bonding, and reproductive strategies: A reconceptualization of adult attachment. In J. A. Simpson and W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 353-393). NY: Guilford.
- Konner, M. (2004). The ties that bind. *Nature, 429*, 705.
- Kunce, L. J. & Shaver, P. R. (1994). An Attachment theoretical approach to caregiving in romantic relationships. *Advances in Personal Relationships, 5*, 205-237.
- Kurdek, L. A. (2005). What do we know about gay and lesbian couples? *Current Directions in Psychological Sciences, 14*, 251-254.
- LePine, J. A., Erez, A., & Johnson, D. E. (2002). The nature and dimensionality of organizational citizenship behavior: A critical review and meta-analysis. *Journal of Applied Psychology, 87*, 52-65.
- Low, S. M. (1992). Symbolic ties that bind. In I. Altman & Y. S. Low (Eds.), *Place attachment, human behavior and environment* (pp. 165-185). NY: Plenum.
- Mesch, G. S., & Manor, O. (1998). Social ties, environmental perception and local attachment. *Environment and Behavior, 30*, 504-509.
- Mikulincer, M., & Florian, V. (2001). Attachment style and affect regulation: Implications for coping with stress and mental health. In G. Fletcher and M. Clark (Eds.), *Blackwell Handbook of Social Psychology: Interpersonal Processes* (pp. 537-557). Oxford, UK: Blackwell Publishers.
- Mikulincer, M., & Shaver, P. R. (2007). *Attachment in adulthood: Structure, dynamics, and change*. NY: Guilford.
- Mohr, J. J. (2008). Same-sex romantic attachment. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of Attachment: Theory, research, and clinical applications* (2nd. ed.) (pp. 482-502). NY: Guilford.
- Mohr, J. J., & Fassinger, R. E. (2003). Self-acceptance and self-disclosure of sexual orientation in lesbian, gay, and bisexual adults: An attachment perspective. *Journal of Counseling Psychology, 50*, 282-295.
- Organ, D. W. (1990). The motivational basis of organizational citizenship behavior. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior*, (Vol. 12, pp. 43-72). Greenwich, CT: JAI Press.
- Reizer, A. (2004). *The caregiving system: Conceptualization and measurement of the mental representations of self and other*. A doctoral dissertation submitted to Bar-Ilan University, Ramat-Gan.
- Ridge, S. R., & Feeney, J. A. (1998). Relationship history and relationship attitudes in gay males and lesbians: Attachment style and gender differences. *Australian and New Zealand Journal of Psychiatry, 32*, 848-859.
- Wells, G. B., & Hansen, N. D. (2003). Lesbian shame: Its relationship to identity integration and attachment. *Journal of Homosexuality, 45*, 93-110.
- Tziner, A. (2002). Human resource management and organization behavior. *Aldershot*, Hampshire: Ashgate.
- Tziner, A., Nicola, N., & Rizac, A. (2003). Relation between social cohesion and team performance in soccer teams. *Perceptual and Motor Skills, 96*, 145-148.
- Zuckerman, M. (2008). *Behavioral expressions and biosocial bases of sensation seeking*. NY: University of Cambridge Press.

Manuscript Received: 21/03/2012

Revision Received: 18/07/2012

Accepted: 18/07/2012