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**Imperatives of Planned Behaviour
Upon Implicit Social Cognition on the
Development of Malaysian Career
Factor Inventory (MyCFI)**

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Abstract

Planned Indecision Behaviour is academically challenging when analysed within the social cognition paradigms. The concept of career indecision usually includes the individual's difficulties in his effort in order to make career decisions. These difficulties traced either before or during decision-making process, which are divided into cognitive or emotional difficulties and hinder the decision making process (Osipow, Carney & Barak, 1976; Sidiropoulou-Dimakakou, D., Mylonas, Kostas, Argyropoulou, Katerina, Tampouri & Sofia, 2012). Research in the field of counselling suggested that 50% or more of all university students experience career-related problems (Herr, Cramer & Niles, 2004; Mansor, 2009). This study is premised in an effort to discover the career indecision's phenomena among the potential graduates and students from the Institution of Higher Learning in Malaysia through the development of Malaysian Career Factor Inventory (MyCFI) with denomination of social psychological' lenses as eigenvector mediators. It is argued that behaviour or at least some of the mediators can be influenced by implicit social cognition. Theory of Planned Behaviour is used as an underpinning theory, which is hypothesised to be understood in the realms of *Pari Materia* that it should be viewed together with the Theory of Cognitive Dissonance. The results may yield a methodological and fundamental understanding that acknowledge both social cognition and planned behaviour approaches. The precision measurement of extrapolating intention of one's before he commits to any

behaviour is also discussed. Results of a preliminary study on Malaysian samples are presented and analysed.

Keywords: Career indecision, implicit social cognition and Malaysian Career Factor Inventory (MyCFI)

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Introduction

The rise of the modern science during the 19th century had given evolutions to the field of psychology and medicine for the scientific study of human behaviour. In the early of 20th century, it was the era of scholars like Edwin Thorndike, Ivan Pavlov, John Watson and B.F. Skinner redefined psychology as the science of observable behaviour. However, in 1960s, the field of psychology began to recapture its interest in mental process and it was redefined as the science of behaviour and mental processes. According to House (2008), many have seen the decades from 1930s through 1960s as a kind of 'Golden Age' in the scientific and institutional development of the social sciences, with an interdisciplinary field of social psychology very much at the centre of it all. Therefore, in 1960s and 1970s, social psychology had managed to academically premise itself within the study of human behaviour in the context of groups and cultures. Hence, this corpus of knowledge is deeply rooted and strategically premised as the main focus of this study. The current attempts to delved on the components of exploring on how individual's think, feels, and may behave in regards to other people and how individuals' thoughts, feelings and behaviour are affected by other people.

Social cognition generally refers to the mental operations that underlie social interactions, including perceiving, interpreting, and generating responses to the intentions, dispositions and behaviours of others (Fiske & Taylor, 1991; Kunda, 1999; Green & Horan, 2010). According to Schneider (1991; Bazerman & Tenbrassel, 1998), social cognition has become the dominant perspective in social psychology. However, it is important to understand that the 'dark matter' of the mind involves the implicit processes (Schacter, 1987; Amodio & Ratner, 2011). In addition, implicit social cognition refers to the mental processes that influence social perception and behaviour independently of conscious awareness (Greenwald & Banaji, 1995; Amodio, & Ratner, 2011).

Recent studies revealed that a significant proportion of university students are undecided about their career paths (Lee, 2005; Sidiropoulou-Dimakakou, Mylonas, Kostas, Argyropoulou, Katerina, Tampouri & Sofia, 2012) and that career indecision is related to various cognitive factors, such as career decision-making, self-efficacy (Creed & Patton, 2003; Sidiropoulou-Dimakakou, Mylonas, Kostas, Argyropoulou, Katerina, Tampouri & Sofia, 2012), dysfunctional career thoughts (Sampson, Peterson, Lenz, Reardon & Saunders, 1998; Sidiropoulou-Dimakakou et al., 2012), lack of information (Germejis & De Boeck, 2003; Sidiropoulou-Dimakakou et al., 2012), internal-external conflicts (Thompson & Subich, 2006; Sidiropoulou-Dimakakou et al., 2012; Sidiropoulou-Dimakakou, Mylonas, Kostas, Argyropoulou, Katerina, Tampouri & Sofia, 2012), self-knowledge (Gati & Saka, 2001; Sidiropoulou-Dimakakou et al., 2012) and one's previous working experience (Lent, Brown, Talleyrand, Mc Partland, Davis, Chopra et al., 2002; Sidiropoulou-Dimakakou et al., 2012). Therefore, as a case study to the said phenomena, this research has identified how implicit social cognition influence career indecision among graduates and students at public universities in Malaysia.

It is not an easy task to make career decision, especially for many young people. Some would have conflict either should they continue to the next degree level after finish their first degree or some would think should they find a job immediately after finish their first degree; and if it is yes, many of them have no ideas what type of job that suit them. There are few other decisions that exert as profound an influence on people's lives as the choice of a field of work, as people typically spend more waking time engaged in work than in any other activity (Hackett & Betz, 1995; Tansley, Jome, Haases, & Martens, 2007). Thus, today's college students are faced with increasing uncertainty and risk in the world of work when making career-related decisions (Bright & Pryor, 2005; Tansley, Jome, Haases, & Martens, 2007).

According to Mojgan, Abd. Kadir, & Soheil (2011), deciding upon a career is one of the most important areas of decision making. Career indecision has been one of the central research issues of counselling and psychology, especially in young adults who are in the midst of making critical life decisions. Being undecided about career is not necessarily developmentally inappropriate for adolescents and young adults (Super, 1957; Downing & Nauta, M.M 2010), and some have even argued that such indecision may simply represent a healthy open-mindedness (Krumboltz, 1992; Downing, & Nauta, 2010). Gordon (1998; Mojgan, Abd.Kadir, & Soheil, 2011) believes students with career indecision feel paralyzed, unclear, and anxious; and even if the choices have already been made, they are still unable to make commitment to their academic choices. Callanan & Greenhaus (1992; Mojgan, Abd.Kadir & Soheil, 2011) viewed career indecision as a serious problem which it does not always act as facilitator of decision making process. Therefore, according to these authors, the said arguments stress the multidimensionality of career indecision.

Research in the field of counselling research suggests that 50% or more of all university students experience career-related problems (Herr, Cramer & Niles, 2004; Mansor, 2009). This statement is previously confirmed by Chandler & Gallagher (1996; Downing, & Nauta, 2010) when they said career indecision is a common presenting concern at university counselling centres. Choosing a career is an important step that affects the life course of students. Student's career choices may fulfil their needs, values, and interests and hence influence their quality of life. However, some students are unable to make decision about the career they wish to pursue, a state that is referred as career indecision (Gati & Asher, 2001; Guay, Rattle, Senecal, Larose & Deschenes, 2006).

Malaysia: The Bigger Picture

About 55 years ago, in 1957, when Malaysia achieved its independence from British colonial rule, it was one of the poorest countries in the world. It was grouped in the band of poor underdeveloped that include Honduras, Egypt, Ghana and Nigeria. Now, in 2102, Malaysia's income is eight times that of

Ghana, about five times that of Honduras and three times that of Egypt. In terms of growth, Malaysia now joins the band of the top tier group, which includes Taiwan, China, South Korea and Thailand (UNDP, 2005).

An aspect of this remarkable achievement is attributed to Malaysia's ability to combine growth with distribution, indeed a not-so-easy task to achieve in any country, globally. The overall poverty rate had fallen from 58% in 1970 to 2.8% in 2010, and hardcore poverty reduced to below 5%. This has been further translated to the overall reduction of income divide between ethnic groups, through a policy of betting on the weak many besides the strong few (Leete, 2007).

It is inevitable that poverty reduction is also related to the strong increase in job creation. If the rest of the world has been struggling to deal with unemployment, Malaysia on the contrary is importing labour from the immediate region of Southeast Asia. A remarkable 7.5 million jobs have been created since independence, an increase of about 260%, a remarkable achievement that even the US is hard pressed to equal.

Malaysia invested heavily in education and technology, campaigned tirelessly countrywide to increase savings, created and implemented a strong and successful affirmative action policy with positive results, and most importantly drew up an effective macroeconomic policies underpinned by social concerns. That it looks to the successful economies of East Asia (Japan, South Korea and Taiwan) as models was unusual to many but common sense to the leaders of Malaysia.

It was the same leadership that refused to adopt IMF policies as solutions to the financial crisis of 1997. Although it was done on a pragmatic basis and considered unorthodox, the outcome more than justified the decision and action. Malaysia experienced the shortest economic downturn when compared to other countries in the ASEAN region affected by the crisis and it emerged bankrupt- and debt-free (Stiglitz, 2002).

The success has had a tremendous sociological impact that is rarely mentioned but highly meaningful to all Malaysians. Had Malaysia followed the IMF policies, including aborting the affirmative action policy, it would have brought about serious inter-ethnic conflict that would have dismantled not only what have been implemented successfully since Independence but also put into disarray the future of social cohesion in Malaysia (Shamsul & Anis, 2010).

In sum, Malaysians of all walks of life have enjoyed a tremendous increase in the standard of their quality of life. This, in turn, has brought about peace and stability in the country. Everything, however, is not plain sailing, as multi-ethnicity exposes differences and contestations. In spite of this, social mobility remains the single most important motivation for all Malaysians. This is indeed the driving force behind the career-mindedness of most young Malaysian whose career choice-making is often fraught with numerous challenges, that has, in turn, created traumas which need to be understood better.

It is in this context, for instance, the indecisiveness among Malaysian potential graduates and student from the public institutes of higher learning in their pursuit of their careers have to be understood and evaluated. Is this partly

the 'price of affluence' that we Malaysian society has to pay or, simply, an indication of a much deeper social psychological challenge the youth are confronting. The present case study hopes to provide a better understanding of the said challenge.

The Present Study

The current study attempts to describe on how implicit social cognition affected the behavioural intention towards career decision among the potential graduates and students from the Institution of Higher Learning in Malaysia, and to identify the relationships between implicit social cognition and behavioural intention towards career decision for future orientation. Theory of Planned Behaviour is used as the underpinning theory, which is hypothesised, *pari materia*, when it is viewed together with the Theory of Cognitive Dissonance besides the development of Malaysia Career Factor Inventory (MyCFI) with denomination of social psychological' lenses as the proposed *eigenvector* mediators.

Theory of Cognitive Dissonance and Theory of Planned Behaviour

In social psychology, we generally refer to cognitive dissonance in order to explain the conflict and psychological tension when people notice there are discrepancies between their attitude and behaviour, such as career indecision. Attitudes can influence behaviour through two different mechanisms which according to the Theory of Reasoned Action and Theory of Planned Behaviour (Baron, R.A., Branscombe, N.R. & Byrne, D., 2009). Social scientists generally invoke cognitive dissonance to explain the resulting psychological tension that people experience. Cognitive dissonance claims that inconsistency among individual's cognitions generates a negative state (dissonance), which motivates the individual to seek a strategy to lessen the unpleasant condition; the rejection of dissonant information has been argued to be the most effective strategy to reduce cognitive dissonance (Buckmaster, Ann & McKenzie, Kenneth, 2009). In other words, cognitive dissonance is a psychological discomfort created by an inconsistency or contradicting among one's thought or behaviours that one is then motivated to reconcile (Festinger, 1957; Stalder, Daniel, R., 2012).

Method

Participants

In total, a pre-selected sample of 114 undergraduate students within Malaysian local universities and other higher education institutions, aged between 18 to 37; 48 males (M=20.94 years, SD=2.49) and 66 females

(M=20.65 years, SD=2.570) participated in this study. The key criterion for inclusion in the study was their participation at a career and job fair event in Universiti Putra Malaysia (UPM), Serdang, Selangor, Malaysia.

Instrumentation

A Malaysian version of Computer-Assisted Self-Administered Career Factor Inventory (MyCFI) Questionnaire is used for the purpose of this study.

The CFI is a self-administered and interpretable psychometric instrument consisting 21 multidimensional items was developed to measure personal-emotional and informational antecedents of career indecision, includes four scales: Career Choice Anxiety (6 items), Generalized Indecisiveness (5 items), perceived Need for Career Information (6 items) and perceived Need for Self-Knowledge (4 items) (Chartrand & Nutter, 1996). According to Chartrand (1994; Chartrand, 1996), the distinction between affective and informational antecedents of career indecision is important because decisional barriers may be a function of informational deficits, affective interference or both.

The CFI is a promising measure based on the multidimensional orientation to access both level and type of career indecision and the utility with college populations in general (Chartrand, Robbins, Morrill & Boggs, 1990; Chartrand, Martin, Robbins & McAuliffe, 1994; Lewis & Savickas, 1995; Chartrand & Nutter, 1996; Chartrand & Robbins, 1997; Simon, Merrill, A & Tovar, E., 2004). According to Chartrand & Nutter (1996), the CFI was developed in the differential psychology tradition and the goal is to identify individual differences across multiple dimensions of career indecision.

Procedure

The MyCFI were completed upon students registering the job fair at UPM. Participants were being informed that answers given were assured completely confidential.

Results

A total of eight variables were analysed. The significance levels for the correlations presented in Table 1 have been adjusted to account for the multiple variables used in the analysis. The aim of this procedure was to reduce Type II error (Guildford & Frucher, 1973). Allowing for eight variables the significance level became 0.327 ($p < .05$) and 0.408 ($p < .01$). The used of dichotomous variables in correlation analysis can restrict the range of phi correlations (Glass & Stanley, 1970). In the current analysis the following variables were dichotomous: Behavioral Beliefs (BB), Attitude towards the Behaviour (ATB), Normative Beliefs (NB), Subjective Norms (SN), Control Beliefs (CB), Perceived Behavioural Control (PBC) and Career Decision (CD) or Career Indecision (CiD) in answering the MyCFI items. Given the number of dichotomous variables in this analysis, this limitation of correlation analysis needs to be taken into account when interpreting the results.

Table 1. *Correlations between all variables used in the Logistic Regression Analysis*

	*BB	ATB	NB	SN	CB	PBC	CD	CI
*BB								
ATB	.511**							
NB	-.086	-.136						
SN	.127	-.307	.093					
CB	-.003	.232	.094	.302				
PBC	.131	.408**	-.078	.113	.384*			
CD	.327	.385*	.062	.037	.384*	.324		
CI	.256	.273	.065	.144	.052	.216	.243	

Note:

BB = Behavioural Beliefs; ATB= Attitude Towards Behaviour; NB = Normative Beliefs; SN = Subjective Norms; CB = Control Beliefs; PBC = Perceived Behavioural Control; CD = Career Decision; and CI = Career Indecision

Significant relationships were identified between five sets of variables. However, for the purpose of the current study, only one Case Study of the five sets is discussed. The highest of these is the correlation between age and career decision making ability. One reason for this higher correlation was the use of MyCFI scores. If the scaled of MyCFI score had been used, both age and career decision making abilities would have been required to assess receptive decision making skills, whereas the raw score, although obviously correlated with age, represents an independent measure of career decision making competence. This is despite it not being a norm based measure of decision making skills abilities. While a significant correlation has been reported between age and decision making abilities, the magnitudes are not high enough to create problems of multicollinearity in the subsequent logistic regression analyses given all are below the critical value of 0.8 (Tabachnick & Fidell, 1996).

Significant correlations were also reported for a number of the occurrences of career indecision-related behaviour. A significant relationship was identified between career decision making ability and Normative Belief factors and Subjective Norms factors. Given detailed formal information was the central focus in the Normative Belief items it was expected that a higher correlation would be identified between this factor and career decision making ability. Similarly, a correlation was expected between career decision making ability and the items of Subjective Norms factors where formal information also acquired, while to a lesser degree than Normative Belief, was also a focus.

A significant relationship was also identified between the Attitude towards the Behaviour and both the Normative Belief and Subjective Norm items. This correlation may be explained by the nature of these items presented within the sociocultural contexts when compared to the Behavioural Belief items in the MyCFI questionnaire. In summary, a number of significant correlations were identified between selected variables used in the current study. In the following section, the results from series of logistic regression analyses are reported.

A series of logistic regression analyses was completed using data from both the Career Decision and Career Indecision scores. Each model investigated the relationships between selected independent variables, either age, career decision making ability, or career indecision inclinations with the dependent variable, which was the respective measure of the frequency of occurrence of a high score in the MyCFI questionnaire. The variables of age and decision making ability were always entered into the analyses because evidence indicates that both variables are important for demonstrating and understanding about career decision making processes. For example, career theorists have agreed that the process of career development and decision-making for adolescents requires a level of maturity (attitude and competency) that is characterised by an exploration of one's ability, knowledge of available careers, employment, and training opportunities (Super, Crites, Hummel, Moser, Overstreet & Warnath, 1957; Gottfredson, 1981; Rowland, K.D., 2004).

According to Ganzel, A.K. (1999), researchers interested in the origins of various "undesirable" choices have typically focused on factors that predict those choices. Investigators interested in normative decision making have looked at age-related changes in the decision process. However, to date, the debates continue either age factor involve in decision making process or not. Some authors maintain that there are no fundamental differences between the decision skills of teens and adults, especially given frequent deficits in adult decision making (Melton & Russo, 1987; Moshaman, 1993; Ganzel, 1999). Whereas, in contrast, Nakajima and Hotta (1989; Ganzel, 1999) in their study of 12 to 23 year olds, found that with age participants were generally more efficient in their information search (using more systematic comparison). Therefore, Ganzel (1999) concluded there are number of factors that may contribute to these differential findings, including the general research questions (can teens make decisions as well as adult?).....that in the nearly exclusive focus on cognitive skills, we have overlooked a potentially important factor in explaining these findings, and this concerns the role of affect.

Gender was not included as an independent variable because in both pilot testing and preliminary analysis it was not found to be significant. This finding is consistent with other career decision research. Though some research has demonstrated that there are significant relationships between gender and various constructs related to career indecision and the career decision-making process, but there still have studies attempted to demonstrate the vice versa results. Several studies found either minimal differences or no differences in career decision-making self-efficacy between gender, both in the college population and in grade school students (Taylor & Bertz, 1983; Taylor & Popma, 1990; Luzzo & Ward, 1995; Chung, 2002; Creed, Patton & Prideaux, 2006; Scott, A.B & Ciani, K.D (2008). Therefore, in this study, the different analytical conditions and requirements for each case study were the primary focus in the analyses, and were therefore entered last into models, after the effects of age and career decision making ability were accounted for.

Case Study 1: Behavioural Belief as a Factor

For the purpose of analytical discussions in the current study, only Case Study 1 is presented. In the first logistic regression analysis the total score from Behavioural Belief Factor was used as a dependent variable, with career decision making ability, age and type of MyCFI score (either Carer Decision or Career Indecision high-scores) as the independent variables. The Behavioural Belief Factor total included only samples who exhibited occurrences of high career decision making scores based on the MyCFI pre-determined score levels. Three models were tested using the Behavioural Belief Factor in total, which was a dichotomous dependent variable, and varying combinations of the independent variables. The results for these models are presented in Table 2.

Table 2. *Logistic Regression Analysis Models for Case Study 1*

	b	S.E b	Wald	df	p	R	exp b	Cox Nag
Model 1								
CDM score	.063	.023	8.992	1	.004	.246	1.061	.091
								.138
Model 2								
Age	-.024	.045	.214	1	.645	.000	.976	
CDM	.066	.027	7.489	1	.005	.218	1.060	.093
								.141
Model 3								
CDM score	.086	.025	10.021	1	.003	.263	1.089	
myCFI type score	2.754	.676	16.622	1	.000	.351	15.933	.267
								.421

The first model tested used Career Decision Making ability score as an independent variable. This variable was found to be a significant predictor of the Behavioural Belief Factor total. Based on this result, Model 2 was a two stage model with age being entered as the first independent variable, followed by Career Decision Making ability. Model 2 indicates that age was not a significant predictor of performance but that Career Decision Making ability was significant even after controlling for age. Despite the significant relationship identified through the correlation analysis between age and Career Decision Making ability, these variables appear to be measuring different characteristics. According to Wald statistic, Career Decision Making ability is over 20 times more influential than age as a predictor of Career Decision Making Factor. Because age was not as a significant predictor in Model 2, it was not included in subsequent analyses of data for Case Study 1.

Discussions

There are several important consequences of variations in the views on career decision or indecision and career guidance patterns for social cognitive development of potential graduates and students. However, for the purpose of this article, only one case study was presented and analysed from sets of multiple case studies of a more comprehensive study on MyCFI. For example, the greater indulgence of Malaysian job seekers in inappropriate job searching activities may encourage their dependency on others and a need to be guided by inappropriate significant others. The differences in the processes of cognitive guidance among Malaysian adolescents within their sociocultural contexts may have consequences for differences in thinking and decision making patterns of Malaysian future employees. For instance, Malaysian who are shown models for thinking and construction of job seeking knowledge through inappropriate channels may not take the initiation to explore and construct their own implicit knowledge in the career-seeking settings.

Within the discussions on knowledge construction, the current findings suggested that Malaysian students and perhaps other students from similar cultural communities that value development of interdependency are more likely to benefit from implicit interactional or interpersonal contexts where adults or their knowledgeable peers may initiate the career decision abilities, structure and scaffold the decision making processes, model the strategies and afford considerable opportunity for 'cognitive conflict' which may promote the accessibility and abstracting cognitive knowledge and skills in appropriate career decision making. Career counsellors within the higher institution settings may provide a critical role in these matters. Nonetheless, although gender was found insignificant, it is imperative for university's counsellors provide guidance and understand the career development of students, both males and females. The gender differences which are found in career aspirations and work values were significantly related to occupational level, the higher the occupational level, the greater the differences, with more females aspiring to lower occupational levels. This suggested that the career counselling techniques used for females might be the same for males but delivered with greater degree of intensity. Such techniques as networking, peer counselling and professional support, are useful for females ((Mason, 1994; Scott, & Ciani, 2008).

As indicated by the present findings, implicit social cognitive guidance, as modelled by the participant's implicit career decision guidance pattern, is rooted in cultural values and expectations for career development, particularly within the family and peer influences contexts. The diversity in socialisation of adolescents has implications for their thinking or intended career-related behaviours. As age increased, so did the level of career certainty among high school and college students. Implications for the influence of grade level on career decision-making skills include the importance of taking developmental level into considerations to improve career decision-making skills (Niece & Bradley, 1979; Rogers & Westbrook, 1983; Scott, & Ciani, 2008). Erickson

(1994; Scott, A.B & Ciani, K.D, 2008), suggested that strategies that include parental involvement may be more effective when began in the early grades, such as junior high or teen grade, while peers, parents, teachers, and role models in the community may be more effective with older adolescents (Paa & McWhirter, 2000; Scott, & Ciani, 2008).

Based on the results of this study, it is recommended for policy makers in Malaysia to ensure that counselling professionals in universities must equip themselves with necessary skills and strategies in order to assist all students and future graduates in making more effective career decisions.

Bibliography

- Amodio, D.M. & Ratner, K.G. (2011). A memory systems model of implicit social cognition. *Current Directions in Psychological Science*, 20:143. Available at <http://cdp.sagepub.com> (10 March 2013)
- Baron, R.A., Branscombe, N.R., & Byrne, D. (2009). *Social psychology*. (12ed.). New York: Pearson
- Bazerman, M.H. & Tenbrunsel, A.E. (1998). 'The role of social context on decisions: intergrating social cognition and behavioral decision research.' *Basic and Applied Social Psychology* 20:87-91
- Benjafield, J.G. (1996). *A history of psychology*. Needham Heights, MA: Allyn & Bacon
- Benjamin, Ludy T., Jr. (Ed) (1997). *A history of psychology: original sources and contemporary research*. (2nd ed.). New York: McGraw-Hill
- Reneen, S.V., 2010. 'Career indecision amongst prospective university students.' MA. diss., University of Western Cape
- Tansley, D.P., Jome, L.M., Haase, R.F., & Martens, M.P. (2007). The effect of message framing on college students career search expectations: development of the career search efficacy scale. *Journal of Career Assessment*, 2, 111-123. Available at <http://10.117/106907279400200202> (19 March 2013)
- Buckmaster, Ann & McKenzie, Kenneth (2009). Cognitive dissonance and student's opinions on the invasion and occupation of Iraq. *Defence Studies*, 9:1,118-128. Available at <http://dx.doi.org/10.1080/14702430802666595> (15 December 2011)
- Chartrand, J.M. & Nutter, K.J. (1996). The career factors inventory: theory and applications. *Journal of Career Assessment*, 4:25. Available at <http://jca.sagepub.com> (19 February 2013)
- Despina Sidiropoulou-Dimakakou, Mylonas, Kostas, Argyropoulou, Katerina, Tampouri, Sofia (2012). Career decision-making difficulties, dysfunctional thinking and generalized self-efficacy of university students in Greece. *World Journal of Education*, vol.2, no.1. Available at <http://www.sciedu.ca/wje> (18 February 2013)
- Downing, H.M. & Nauta, M.M. (2010). Separation-individuation, exploration, and identity diffusion as mediators of the relationship between attachment and career indecision. *Journal of Career Development*, 2010 36: 207. Available at <http://www.jcd.sagepub.com>. (19 February 2013)
- Fabio, Annamaria Di, Palazzeschi, Lisa Asulin-Peretz & Gati, Itamar, (2012). Career indecision versus indecisiveness: associations with personality traits and

- emotional intelligence. *Journal of Career Assessment*, 00(0) 1-15. Available at <http://jca.sagepub.com> (19 February 2013)
- Freedheim, D.K. (Ed.) (2003). *Handbook of psychology: History of psychology*, Vol. 1. New York: Wiley
- Furumoto, L. & Scarborough, E. (2002). *Placing women in the history of psychology: the first american women psychologists*. *Evolving Perspectives on the History of Psychology* (pp. 527-543). Washington, DC: American Psychology Association
- Guay, F., Ratelle, C.F., Senecal, Caroline, Larose, S. & Deschenes, A.(2006). Distinguishing developmental from chronic career indecision: self-efficacy, autonomy, and social support. *Journal of Career Assessment*, vol.14, 2: 235-251. Sage Publication
- Ganzel, A.K. (1999). Adolescent decision making : the influence of mood, age, and gender on the consideration of information. *Journal of Adolescent Research*. 14: 289. Available at <http://jar.sagepub.com> (10 March 2012)
- Glass G.V. & Stanley, J.C. (1970). *Statistical methods in education and psychology*. Prentice-Hall: New Jersey
- Green, M.F. & Horan, W.P. (2010). Social cognition in schizophrenia. *Current Directions in Psychological Science*, 19:243. Available at <http://cdps.sagepub.com> (10 March 2013)
- Guildford, J.P., & Fruchter, B. (1973). *Fundamental statistics in psychology and education* . New York: McGraw-Hill
- Hatfield, G. (2002). Psychology, philosophy, and cognitive science: reflections on the history and philosophy of experimental psychology. *Mind & Language*, 17, 207-232
- Hergenhahn, B.R. (2001). *An Introduction to the history of psychology* (4th ed.). Belmont, CA: Wadsworth/Thomson Learning
- Hill, D.B., & Kral, M.J. (Eds.) (2003). *About psychology: essays at the crossroads of history, theory, and philosophy*. Albany, NY: State University of New York Press
- Hock, R.R. (1999). *Forty studies that changed psychology: explorations into the history of psychological research* (3rd ed.) Upper Saddle River, NJ: Prentice Hall
- House, J.S. (2008). Social psychology, social science, and economics: twentieth century progress and problems, twenty-first century prospects. *Social Psychology Quarterly*, 71:232. Available at <http://spq.sagepub.com/content/71/3/232> (1 March 2013)
2006. Icek Ajzen: Theory of Planned Behaviour. Available at <http://people.umass.edu/aizen/tpb.measurement.pdf>
- Jones, D., & Elcock, J. (2001). *History and theories of psychology: a critical perspective*. London: Arnold
- Keen, E. (2001). *A history of ideas in American psychology*. Westport, CT: Praeger Publishers/Greenwood
- Leete, Richard, (2007). *From kampung to twin towers: 50 years of economic and social development*, Shah Alam : Oxford Fajar
- Mandler, G. (2002). Origins of the cognitive (r)evolution. *Journal of the History of the Behavioural Sciences*, 38, 339-353
- Mansor Abu Talib (2009). Predictors of career indecision among Malaysian undergraduate students. *European Journal of Science*, vol.8, No.2:215
- Mojgan, F.N., Abd. Kadir, R. Mojgan, F.N, Abd. Kadir, R & Soheil, S. (2011) The relationship between state and trait anxiety with career indecision of

- undergraduate students. *International Education Studies*, vol.4, No.3. Available at <http://www.ccsenet.org/ies> (15 December 2011)
- Rieber, R.W., & Robinson, D.K. (Eds.) (2001). *Wilhelm Wundt in history: the making of a scientific psychology*. New York: Kluwer Academic/Plenum
- Robinson, D.N. (1995). *An intellectual history of psychology* (3rd ed.). Madison, WI: University of Wisconsin Press
- Rowland, K.D. (2004). Career decision-making skills of high school students in the Bahamas. *Journal of Career Development*, 31:1. Available at <http://jcd.sagepub.com> (10 March 2013)
- Schultz, D.P., & Schultz, S.E. (1996). *A history of modern psychology* (6th ed.). Orlando, FL: Harcourt Barce
- Scott, A.B & Ciani, K.D. (2008). Career class on men's and women's career decision-making self-efficacy and vocational identity. *Journal of Career Development*, vol. 34:3, 263-285. Available at <http://jcd.sagepub.com> (11 March 2013)
- Shamsul AB & Anis Y. Yusoff (2010). *Managing peace in Malaysia: a case study*, KITA Ethnic Studies Series, UKM: Bangi
- Simon, Merrill, A & Tovar, E. (2004). Confirmatory factor analysis of the career factors inventory on a community college sample. *Journal of Career Assessment*, 12: 255. Available at <http://jca.sagepub.com> (19 February 2013)
- Simonton, D.K. (2002). *Great psychologists and their times: scientific insights into psychology's history*. Washington, DC: American Psychological Association
- Stalder, Daniel, R. (2012). The role of dissonance, social comparison, and marital status in thinking about divorce. *Journal of Social and Personal Relationships*, 29: 302. Available at <http://spr.sagepub.com> (10 March 2013)
- Stiglitz, J. (2002). *Globalization and its discontents*, London: Allen Lane.
- Tabachnick, B.G., & Fidell, L.S. (1996). *Using multivariate statistics* (3rd ed.). New York: Harper Collins
- Thorne, B.M., & Henley, T.B. (2001). *Connections in the history and systems of psychology* (2nd ed.) Boston, MA: Houghton Mifflin
- UNDP. (2005). *Malaysia's human development: progress and challenges (2005)*, Kuala Lumpur: UNDP
- Unger, R.K. (2001). Women as subjects, actors, and agents in the history of psychology. *Handbook of the Psychology of Women and Gender* (pp. 3-16). New York: Wiley