Chapter 1: Introduction

Mumbai, 26th November 2008

Time: Approximately 9:20 p.m.

Venue: Chhatrapati Shivaji Terminus, Mumbai

Two young adults armed with AK-47 rifles entered the passenger hall of the Chhatrapati Shivaji Terminus (CST) railway station, opened fire and threw grenades, killing at least ten people. No one, even the police personnel, could have “imagined” such a sudden attack and were least “prepared” for it! Within minutes, similar attacks broke out at few other places in Mumbai and it was learned that it is a terror strike. Soon the public, media and politicians were saying, “If our security measures would have been stronger, then such an attack would not have happened.” Some others said, “If there had been less negligence in security measures, then this would not have occurred.”

I begin with this incident as it illustrates several important points about human cognition—how, in essence, our mind works as we try to understand the world around us and function adaptively. And such processes form the basis of social cognition. The nature of cognitive processes driven or modified by social factors is a very wide area of study that includes social perception, non-verbal communication, social attention, social memory, group behaviour, impression formation, impression management, etc. The aspect of social cognition that interests me and is the subject of study in this thesis is counterfactual thinking.
1.1 Counterfactual thinking

Counterfactuals are thoughts of what might have been, of how the past might have turned out differently (Chen, Chiu, Roese, Tam & Lau, 2006; Roese, 1994, 1997; Roese & Olson, 1993, 1995). For e.g., “If only I had studied harder, I would have passed the exam.” or “If she had not been driving so fast, she would not have been in an accident.” As these two examples make it clear, counterfactuals often take the form of “if-then” conditional propositions in which the “if” corresponds to an action and “then” to a goal (Chen et al., 2006). Counterfactual thoughts may be further divided into those that are additive versus subtractive, that is, whether they focus on the addition of new aspects that were not in fact present (e.g., studying harder) or the subtraction of factual aspects that were in fact present (e.g., driving fast; Roese & Olson, 1993). This difference between additive and subtractive counterfactuals has been variously described in past research using such terms as regrets of inaction versus action or omission versus commission (Chen et al., 2006).

Similarly, when considering the direction of counterfactuals, they could be categorized as upward counterfactuals where one could be better off [e.g.” If only I hadn’t been playing around with the radio, I wouldn’t have had the accident.”] or downward counterfactuals where one could be worse off [e.g. “At least I had my seat belt on. Otherwise I could have been killed.”] (Jasper, Barry & Christman, 2008; Markman, Gavanski, Sherman & McMullen, 1993). Additive or subtractive counterfactuals could itself be in an upward or downward direction. Likewise, upward or downward counterfactuals could either be additive or subtractive in nature.

The generation of counterfactual thinking is conceptualized as a two stage process, the initial or first stage being activation followed by content (Roese, 1997). Activation refers to
whether the process of counterfactual generation is initially switched on or off, whereas content refers to the specific makeup of the resulting counterfactual thought. The two are linked but theoretically distinct aspects of counterfactual generation and preliminary activation is an essential condition for any content effects to transpire but not vice versa (Roese, 1997). Also, different variables influence the two stages of activation and content.

Recently, Epstude and Roese (2008) explained the mechanism of counterfactual thinking using two different pathways – content specific and content neutral pathways. The content specific pathway involves the transfer of information (regarding action that might have been taken, hence focusing on additive counterfactuals) from the counterfactual inference to behavioural intentions, which in turn influence the performance of corresponding behaviour. Content neutral pathway involves the way information is handled, as opposed to the details of the information itself. Therefore, this pathway does not take into account the structure or content of counterfactuals elicited. On the contrary, the counterfactuals may initiate attentional, cognitive, or motivational processes that themselves modify behavior (Epstude & Roese, 2008).

Counterfactual thinking and generation has been the subject matter of empirical research for experimental and social psychologists for more than twenty-five years in which they have directed their attention to two broad questions. Firstly, what are the affective, motivational, cognitive, and social determinants of counterfactual thinking? Secondly, what are the functional and psychological consequences of counterfactual thinking? The book titled “What might have been: The social psychology of counterfactual thinking” by Roese and Olson (1995) reviewed almost all the work done till date on counterfactual thinking by psychologists. Moreover, off late there has been a lot of debate and cross-cultural comparisons about whether people engage more in additive or subtractive counterfactual thinking and also about the factors which affect such...
tendencies among people of different cultures (Bloom, 1981; Au, 1983, 1984, 2004; Chen et al., 2006; Gilovich, Wang, Regan & Nishina, 2003; Zou, Tam, Morris, Lee, Lau & Chiu, 2009). In spite of these deliberations about predilection for subtractive or additive counterfactuals across cultures, no specific conclusion has been reached so far and this present piece of work is an exploration in this direction only.


Thereafter, a sort of paradigm shift occurred in the area of cross-cultural comparisons on counterfactual thinking and the focus shifted to study of regret and counterfactual thinking. Carrying on with this approach, Gilovich et al. (2003) asked participants from United States of America, China, Japan, and Russia (which varied in terms of degree of individualism as per their description) to engender long term regrets of inaction and action (similar to additive and subtractive counterfactuals respectively) and inferred that across cultures people generate long term regret more for inactions than actions.

Somewhat similar to the above, Chen et al. (2006) using American and Chinese participants solicited counterfactuals about different domains of individual’s life using “If only . . . , then . . .” formats and concluded that in both cultures people generate more additive than subtractive counterfactuals. Also, they found that inclination to generate subtractive counterfactuals was higher in Chinese participants as compared to Americans in some domains.
Adhering to the methodology of Chen et al. (2006) in the generation of counterfactuals, Zou et al. (2009, Study 3) also compared the European American and Chinese undergraduates. They reckoned that Chinese participants, in contrast to American, generated significantly more subtractive counterfactuals across domains, and hence their conclusion was in line with the past research of Chen et al. (2006). Apart from investigating counterfactuals, Zou et al. (2009) also looked at the personal regulatory focus orientation and culturally consensual regulatory orientation among the participants. According to Zou et al. (2009) personal regulatory focus orientation is the one which develops out of the individual’s personal values and beliefs. Whereas, culturally consensual regulatory focus orientation develops as a result of the individual’s perception of the views of the people around him.

The inclination to self-regulatory style of promotion focus vs. that of prevention focus has been used in counterfactual studies to explain the preference for additive or subtractive counterfactual thinking respectively (Roese, Hur, & Pennington, 1999) where self-regulation with a promotion focus is characterized by concern for attainment of positive outcomes, the desire for advancement and growth. In contrast, the self-regulation with prevention focus is typified by concern about security, safety, responsibility, and maintenance of the status quo (Higgins, 1998).

From the above descriptions it is clear that cross-cultural comparisons in counterfactual thinking have focused mainly on the East-West differences or similarities in the content of counterfactuals. However, there are a few lacunae in these cross-cultural researches (which have been discussed in greater detail in the next chapter on Literature Review) and the one worth pointing out is the way they look at and use the concept of culture.
The East-West differences are based on the assumptions that historically the philosophies of Greece and China differ. This difference in philosophical tradition, that is the continuation of Aristotelian tradition in the West and Confucian tradition in the East (Nisbett, 2003), is the basis for independent vs. interdependent or individualistic vs. collective thought processes (like reasoning, perception, etc.) in East and West respectively (Masuda & Nisbett, 2001; Nisbett, 2003; Nisbett, Peng, Choi, & Norenzayan, 2001). Moreover, it is believed that these “philosophers also served to entrench habits of thought that were already characteristic of their societies” (Nisbett, 2003 p. xxi).

However, these studies investigating the thought processes in the East and West look at cultures from the macro level and make inferences about very large groups (in terms of number) like Americans, Europeans, Chinese, Japanese, Koreans, but not take into consideration the possible differences in thought processes at the micro level or sub-cultures like the rural vs. urban Americans or the rural vs. urban Chinese, etc. One could say that all Chinese are not alike or Americans are not alike. Hence, it is equally imperative to look at the possible heterogeneity in these large ethnic groups as suggested by Triandis and his colleagues (Triandis, 1995; Triandis & Gelfand, 1998) who are of the view that cultures differ not only in their levels of individualism and collectivism, but in the degree to which they are vertical (emphasizing hierarchy) and horizontal (emphasizing openness).

These East-West comparisons of thought processes as well as counterfactual thinking discussed above do not attempt at elucidating what ‘culture’ means for them and at best have operationalized culture quasi-experimentally through country status. Furthermore, the range of respondents considered in such studies is limited to university students only. Therefore, before
proceeding any further, it is imperative that I spell out what culture means to me, how I look at the notions of ‘culture’ and what kind of cross-cultural comparison I make in this thesis.

1.2 Culture in my view

It can be safely said that culture is elementary to disciplines that seek to describe and comprehend the nature of human groups and societies. Culture is a very broad concept which goes beyond individuals and does not lend itself easily to a psychological level of analysis (Schaller, Conway, & Crandall, 2004). Cross-cultural psychology and cultural psychology take somewhat different positions about the construct of culture. The emphasis in cross-cultural psychology is on exploring the influence of culture on individual level psychological processes and in doing so brings in an anthropological frame of inquiry to psychological questions. The focus in cultural psychology is on investigating psychological differences between cultures, but seldom take up questions about the processes through which these cultural differences emerge. The present piece of work is more inclined towards the approach of cross-cultural psychology.

As discussed earlier, culture is a very broad concept and hence to understand it we have to sensibly and fruitfully deconstruct it by defining it. This is not easy because if hundred different people are asked to define culture, one is likely to get hundred different responses. Pye (1997) very aptly characterizes culture as an “elusive” concept. Kroeber and Kluckhohn (1978) in their famous book “Culture: A Critical Review of Concepts and Definitions” described in detail the analysis of about 300 definitions of culture offered by different sections of scientists and historians as well as their own take on the evolution of the concept of culture.
Let us first consider a few definitions of culture given by scholars of different disciplines and then I will come to the definition or view of culture which I have used in my thesis. Sir Edward Burnett Tylor (1871) offered a definition of culture which is one of his most widely recognized contributions to anthropology and the study of religion: “Culture, or civilization, taken in its broad, ethnographic sense, is that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society”. Later, another anthropologist Herskovits (1948, p. 17) offered a very simple definition that culture is “the man-made part of environment”. Triandis (1995), a psychologist, elaborating on Herskovits definition wrote that “culture is a set of human-made objective and subjective elements that in the past have increased the probability of survival and resulted in satisfaction for the participants in an ecological niche, and thus became shared among those who could communicate with each other because they had a common language and they lived in the same time and place.” Mead (1955, p. 12), also an anthropologist, is of the view that “‘Culture’ . . . is an abstraction from the body of learned behaviour which a group of people who share the same tradition transmit entire to their children, and, in part, to adult immigrants who become members of the society”.

Taken together, these different definitions point to an essential set of elements that constitute culture. Culture is not a single observable thing, but a construct inferred from the observation of more specific things like beliefs, habits, actions, artifacts, values, etc. Also, for these more specific things to entail culture, they must be shared that is the belief, habit, action, artifact, value has to be relatively common across the population or group of interest.

Echoing the views of Schaller et al. (2004), I also believe that lots of features may be common among lots of people, but not all of them imply culture. For something to be called
cultural or comprising of culture it must be shared only among some easily identifiable category of people. Schaller et al. (2004, p. 8) call this *categorical identifiability* which could be of temporal, geographical, or demographical in nature. They go one step ahead and are of the view that all shared features of identifiable populations do not define cultures. Rather, the culture defining characteristics must be relatively common within some specific population while being relatively uncommon in others. This is termed as *differential commonality* by Schaller et al. (2004, p. 8). Also, there must be multiple differential commonalities between two populations to imply the presence of two cultures. For e.g. the northern India would not be considered culturally different from southern India on the basis of language alone, rather there are many tangible and non-tangible differences in the way of life which make up these cultures. Likewise, within northern India also there could be numerous cultural groups.

Thus, if some distinguishable type of people is described by a group of norms that differ from the norms describing other types of people, then that type of people is likely to be perceived as having a culture. “The greater the number or more extreme the range of normative differences (in thoughts, actions, language use, etc.), the more likely it is that one will perceive differences of culture” (Schaller et al., 2004, p. 8). Hence, it means that if the difference(s) in feature(s) between two cultures is not of extreme kind then perception of existence of two different cultures will be difficult but not deniable. This line of reasoning lends to the concept of sub-cultures like for e.g. an ethnic group (which is identifiable from surrounding populations) can inhabit in two areas where one is rural and another urban and as a consequence the people living in two locations in the due course of time could be considered as belonging to two cultures. Examples of such studies comparing sub-cultures from India are studies by Dasen, Mishra, and colleagues (Dasen & Mishra, 2008; Dasen & Mishra, 2010). They compared Sanskrit-school and Hindi-
school pupils of Varanasi (India) for egocentric and geocentric spatial Frame of Reference (FoR). This approach of comparing sub-cultures or smaller groups gives us the opportunity to do micro-level comparisons as opposed to macro-level comparisons like East vs. West or one nation with another and thus very subtle differences could also be investigated.

In my thesis I have focused on comparisons of young and old Gurkhas living in the rural and urban locales of Dehradun district in the state of Uttarakhand, India. Gurkhas are known across the world for their valour and soldier skills. However, the Gurkhas here are in transition as there is a growing tendency in the Gurkha youth to break out of the tag of ‘soldier’ and ‘Nepali’ (Nepali means a person from or belonging to Nepal; they are believed to have migrated from Nepal and settled here) and at the same time the old are trying to preserve their identity by not mixing (not preferring marriage in other communities, living in separate colonies in seclusion from other communities) with ‘others’. These tendencies in the young and old generations of Gurkha are not alike in the Gurkhas from rural and urban areas of Dehradun and vary relatively in the rural and urban contexts (for more details see Saxena, 2012-2013). Taking such tendencies into consideration, the young and old Gurkhas of the rural and urban areas of Dehradun have been checked for their self regulatory orientation (promotion or prevention type) and the content of counterfactuals they generate (additive or subtractive) using different methodologies. One practical aspect of studying the Gurkhas was accessibility to the group and permission to carry out research from the government could be obtained.

In the later part of thesis there is a departure from the comparison of rural vs. urban Gurkha to the comparison of young Gurkha with young undergraduates of University of Allahabad, Allahabad (Uttar Pradesh, India) for their preference towards additive or subtractive counterfactuals using a computer based experiment. This shift occurred because the old Gurkhas
are not well versed with the usage of computers and were reluctant to participate in computer-based experiments. Hence, I compared the young adult Gurkhas with young adults in Allahabad to investigate whether the processes seen in young Gurkhas are specific only to them or would generalize to young adults in another place.

1.3 Motivation

There was more than one reason for a detailed multi-methodological cross-cultural research on counterfactual thinking. Firstly, counterfactual thinking is a cognitive process that interacts with various other mental processes. Counterfactual thinking, like other cognitive processes, is conditioned by the context including the cultural context in which it is generated. Past researches has investigated counterfactual thinking across various cultures as discussed earlier (Bloom, 1981; Au, 1983, 1984, 2004; Chen et al., 2006; Gilovich et al., 2003; Zou et al., 2009). In all these cross-cultural studies the concept of “culture” had a very limited scope of merely referring to the different nationalities of the participants. None of them tried to examine and explore these differing cultures from close quarters. Here, I argue against “the naïve inclusion of ‘culture’” as an additional independent factor that can be empirically addressed adequately merely by considering mother tongue or nationality. Instead, it is proposed that culture needs to be considered as a dynamical system of individuals; that culture is in continuous dialectic interaction and exchange with the individuals that constitute it; and that cultural classifications feed back into social practices and identity processes, hence exhibiting a ‘looping effect’” (Vogeley & Roepstorff, 2009). Therefore, a more grounded approach needs to be
adopted while studying the interaction between counterfactual thinking and culture which I have pursued in this research.

Secondly, in all the cross-cultural studies on counterfactual thinking, entire nation (or culture) was deemed to be homogenous and the possibility of heterogeneity within the large groups was not explored. Given the existence of socio-psychological researches in other domains of cognition which have successfully compared sub-cultures in India (like Dasen and Mishra, 2008, 2010), I wanted to investigate whether people in different cultures or sub-groups or sub-cultures within the same culture engage in similar or different forms of counterfactual thoughts.

Thirdly, our life is full of uncertainties and we need to be prepared about them. When we ponder on events through counterfactual thinking, then it enables to think about ‘things which we should have done but never did’ and also about ‘things which we did but should not have done’. The former is additive counterfactual thinking while the later is subtractive counterfactual thinking. This kind of specific thinking i.e. counterfactual thinking prepares us regarding potential future opportunities (through additive counterfactuals) as well as future threats (through subtractive counterfactuals) (Pennington & Roese, 2003; Roese et al., 1999). Counterfactual thinking enables us to plan and execute appropriate actions based on the causal structure of these thoughts. Hence, it becomes even more important to study counterfactual thinking keeping in mind its functional aspects.

Fourthly, there is a significant lack of studies investigating counterfactual thinking in the Indian context. There is a lack of specific information on whether the variables and factors which affect counterfactual generation and content across many diverse nations, especially the West, are valid in the Indian context? Hence, the dearth of studies on this phenomenon in Indian context makes it even more imperative to take up such a study.
1.4 Objectives

The present study focuses on the content of counterfactual thinking (additive/subtractive counterfactuals). Previous studies have proposed that a number of factors like outcome valence (Roese & Olson, 1993), passage of time (Gilovich et al., 2003), culture (Chen et al., 2006; Gilovich et al., 2003; Zou, Tam, Morris, Lee, Lau & Chiu, 2009), and regulatory focus (Pennington & Roese, 2003; Roese, Hur & Pennington, 1999) are detrimental to the generation of counterfactual thoughts. However, the association between any of these factors and content of counterfactual thinking has not been investigated so far in the Indian context. These have been systematically investigated in the present research using a range of methodologies like computer-based experimentation; ethnographic method employing techniques like observation, interviews; and a lastly paper-pencil experiment so as to triangulate the results and develop a holistic view of the phenomenon in different cultural settings.

1.5 Organization of Thesis

The thesis contains five chapters as follows:

The second chapter is a review of the literature on counterfactual thinking which begins with the theoretical background of counterfactual thinking, functional theory or functional aspects of counterfactual thinking, consequence and implications of counterfactual thinking. The chapter also discusses the empirical studies which have investigated factors which effect content of counterfactual thinking and also looks at the cross-cultural studies performed in this area. This
chapter helps us understand the phenomenon of counterfactual thinking with its nitty-gritty, identify the gaps in previous research and establish motivation for the studies performed in this thesis.

The third chapter deals with rural Gurkha population of Karbari Grant village in Dehradun where an ethnography based study was carried out using techniques like observation (non-participant) and unstructured interviews. The emphasis here was more on exploring the kind of regulatory focus orientation (promotion/prevention) which subsists among old and young rural Gurkha population and get some glimpse about the way in which old and young Gurkha go about resolving issues in life (an indirect approach to counterfactual thinking). This initial study helped me to hypothesize about the way in which different regulatory focus orientations among old and young Gurkhas is shaped and how this may lead to predilection for additive or subtractive counterfactuals. The intensive study of the group from close quarters helped me understand in a better way how culture shapes the cognition of an individual when it comes to self-regulatory focus orientations and counterfactual thinking.

In chapter four, the ambit of interest group viz. Gurkhas was expanded further and old as well as young Gurkhas from both rural and urban locales of Dehradun were studied to draw more definitive conclusions. The study was performed in two phases. The first phase comprised of focused structured interviews among young and old Gurkhas of rural and urban Dehradun. This phase was treated as a pilot study for the next phase and also helped me to concretize hypotheses developed in the previous chapter. The second phase comprised of a paper-pencil experiment (questionnaire based study) performed to validate hypothesis developed so far using a more objective way of experimentation in Gurkhas.
The fifth chapter reports another empirical study where I investigated the role of two variables “outcome” (better vs. worse) and “change in outcome” (positive/negative) respectively on the content (additive or subtractive) of counterfactual thinking in two different groups viz. the young Gurkhas from Dehradun and students from Allahabad, Uttar Pradesh (India) using a computer-based experiment.

The last chapter is the concluding chapter of the thesis where inferences drawn from all the studies performed are put together to make a coherent and comprehensive picture. The overall conclusions drawn are discussed in the light of existing literature on counterfactual thinking and how the present work adds to this literature. Future research avenues in the area of culture and counterfactual thinking are also discussed.