CULTURAL INTELLIGENCE: FACTORS AND MEASUREMENT

SEMESTER: BERGEN, FALL 2007

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ABSTRACT

This thesis focuses on cultural intelligence and the factors that are associated with individuals who have the ability to succeed in an international work environment. In review of the literature, the concept of cultural intelligence remains largely open-ended as very little has been tested empirically. An exploratory pilot study was conducted on subjects from Norway and the United Kingdom as an opportunity to work out method issues and to formulate hypotheses to test that had grounding in preliminary experimental data. In essence, the pilot study was used to generate questions, not answers. The intention was to pick out the most important questions and focus on those areas in future research. The CQ Questionnaire$^{©}$ was used, as well as a background survey which assessed factors that may or may not contribute to cultural intelligence. Results showed significant differences in variance between males and females, British and Norwegians.

CHAPTER I

INTRODUCTION

The main goal of this study was to determine how to measure cultural intelligence, or more specifically, to determine what factors of cultural intelligence make it possible for some people to adapt and be successful in international business settings while others are not. Many scholars have attempted to determine the best way to measure cultural intelligence, yet there has been little empirical evidence gathered on the subject. This is a modern concern as the increase in globalization is creating more opportunities for people to work across borders and cultures. The skills needed to survive and be successful in an international work environment are crucial.

Globalization has been increasing in recent years due to many factors, such as: the ability of goods to move freely across borders, the increase in international trade, new international trade agreements, the overwhelming amount of new multinational corporations and the substantial increase in international migration (Thomas & Inkson, 2003). As companies endeavor to reduce costs and increase profits, many more are transferring all or portions of their operations to international locations. As students progress through college and universities, many will find themselves being recruited by these companies who are operating in International locations. Young professionals are moving overseas during the early stages of their careers to fill many of these positions (Inkson, Arthur, Pringle, & Barry, 1997). The individuals needed to fulfill these overseas management positions must be of high quality as the positions are very competitive.

According to Black and Gregersen, successful international managers possess the following characteristics: "a drive to communicate, broad-based sociability, cultural flexibility, a cosmopolitan orientation and a collaborative negotiation style" (Black & Gregersen, 1999). Others, such as Fish and Wood, feel that expatriates and people working in foreign positions will need to have skills that they have gained from practical overseas experience, and not just intercultural skills which have been taught via training programs (Fish & Wood, 1997).

More recent research demonstrates that cultural diversity in the professional work setting presents challenges for multinational teams within firms (Earley &

Gibson, 2002) and for expatriates working in foreign countries (Bhaskar-Shrinivas, Harrison, Shaffer, & Luk, 2005). Many scholars have sought to determine what factors create successful adaptation in culturally diverse environments. Their work has been for the most part theoretically based with little empirical research done. Triandis (2006) focused on the various theoretical relationships between cultural intelligence capabilities and developing appropriate opinions, and Ng and Earley (2006) focused on developing a conceptual model of cultural intelligence.

The ability to react properly in an intercultural environment, or to have high levels of cultural intelligence, may be based on various areas of intelligence, including social and emotional intelligence (Earley & Ang, 2003). Within these intelligences that create the framework for cultural intelligence, behavioral traits and capabilities are identified and assessed. An individual's preferred behavior and learned skills complement each other in order to create an individual who can identify varying intelligences in other cultures and adapt their own behavior and actions or cannot (Brislin, Worthley, & Macnab, 2006). Other areas which are considered when assessing cultural intelligence are cultural training, intercultural business communication theory, and intercultural communication competence theory.

A pilot study was conducted to assess a subject group's cultural intelligence capabilities, using a copyrighted measure created by two researchers in the field of cultural intelligence. Their measurement tool was tested and evaluated, as well as compared to information given from a background questionnaire. The mean of scores, variance, and correlation were all assessed for the overall CQ scores, as well as the CQ sub scores.

CHAPTER II

LITERATURE REVIEW

Cultural Intelligence

National Culture

Many researchers have tried to find a universal definition of the term "culture"; however, no one has succeeded and there are various definitions used in a range of different contexts (Kroeber & Kluckholm, 1952; McSweeney, 2002). Culture is a term that is often used to describe a certain way in which a group of people act, or more specifically, the standards that a group of people share and follow in regard to their traditions and demeanor in a certain nation. Culture can be identified on a national level, or on a smaller level, i.e. within a state or a community. However, an individual's or a group's culture consists of factors that go much deeper than how people act and how they appear on the surface.

A few social scientists who explore this deeper dimension of culture are Fons Trompenaars and Charles Hampden-Turner, and Geert Hofstede. Trompenaars and Hampden-Turner define culture as "*a shared system of meanings*." (Trompenaars & Hampden-Turner, 1997, p. 13) However, Hofstede (1997) states that culture is a structure of collectively held values and collective mental programming which separate or distinguish various groups of people from others (Hofstede G., 1997). Hofstede believes that although there may be various subcultures, all nations share a national culture. That is, Hofstede defines culture as subjective and considers national culture to be a part of a greater global culture (Hofstede G., 1980). This mental programming of the mind refers not only to how a group of people act, but how they view their environment, their interactions in daily life with friends and neighbors, interactions with business associates and authority figures, the way they eat, the way they carry on their traditions, and also their values. Hofstede identifies the three levels in his model of collective mental programming, shown in Figure 1 below, as human nature, culture, and personality (Hofstede G. , 1980).
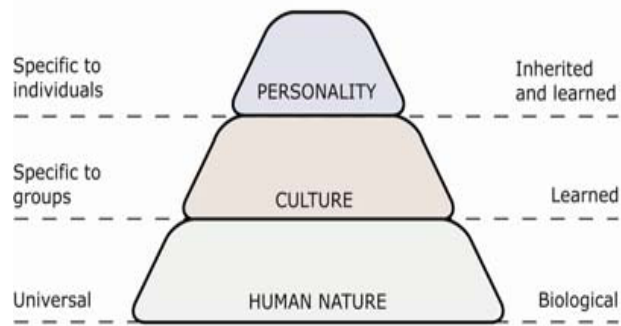
Figure 1: Hofstede's Three Levels of Mental Programming[1]

Hofstede models the complexity of the human mind in regard to culture with the three levels of mental programming as illustrated in Figure 1. Culture is a group trend and it is shared amongst a region, a city, a country, etc. All three levels of mental programming have an impact on how an individual reacts to their environment. Human nature plays a role in the development of culture over time, as well as the development of people, e.g. into leaders or strong team members, as it is comprised of characteristics that are the foundation of the similarities between cultures. Although an individual's culture is usually introduced to them at birth, developed over time, and shared with a group of people, it is also influenced by both human nature and individual personality. An individual's personality indirectly influences culture as it plays a role in how an individual accepts or rejects various parts of their culture. For instance, Alexander Graham Bell invented the telephone and changed the way that various cultures communicated. Therefore, an individual's culture, although it can be the same among a group of people, differs slightly with each individual as an individual may act and behave slightly different than others in their culture group due to the influence of human nature and personality.

Each individual has several layers of mental programming that gradually build as they grow and learn (Hofstede G. , 1980). The deepest, fundamental layers are created at a young age, and then as one progresses through education, technical training, professional training, and life in general, other layers of their mental programming are created. The layers formed in later years have more to do with actions, ways of doing things, and ethics rather than various types of training (Hofstede G. , 1980). The more an individual learns through experience as they get

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[1] Figure taken from Hestflått, 2005

older, the greater their ability is to react properly in various situations, cultural and otherwise.

This is why it is possible that two people from the same culture can be very different from each other in the way they act in a business situation or in their interactions with others, for example. It is wrong to assume that just because two people come from the same country, or the same city, that they will be exactly alike. A shared culture does not mean that there is an overall shared human programming, as individual personality differs among individuals.

Understanding one's culture and the values and beliefs that support it are crucial in order to understand other cultures and the values and beliefs that go along with them (Thomas & Inkson, 2003). Having the ability to understand the strengths and weaknesses, the appropriate behavior and the appropriate actions for given situations in varying cultural contexts, allows an individual to reason quickly which behavior they should demonstrate in any given intercultural environment. This is important in today's modern world as more companies and people are crossing borders and working in international locations. An ability to understand another culture may help these companies and people that are migrating to adapt easier in the foreign location.

There are an assortment of tools that are available that allow people to understand and measure various aspects of culture more easily. One set of tools that assess national cultural differences is Hofstede's five cultural dimensions framework (Hofstede G. , 1997, http://www.geert-hofstede.com/). Hofstede's five cultural dimensions framework measures the five national cultural dimensions. The cultural dimensions are: the power distance index (PDI - which measures the level of inequality); individualism (IDV - which measures the level of individualism vs. collectivism); masculinity (MAS - which measures the level of achievement values vs. the level of relational values); uncertainty avoidance index (UAI - which measures the level of tolerance for uncertainty and ambiguity); and finally long-term orientation (LTO - which measures the level of long-term values, such as saving money and perseverance, vs. short-term values, such as social commitments, relationships and traditions) (Hofstede G. , 1997, http://www.geert-hofstede.com/).

The two countries that were used for the pilot study, which will be discussed in the Methods section below, were Norway and the United Kingdom (UK). Hofstede's five cultural dimensions were applied to these two countries, and the

results can be seen in Figure 2 below. According to Hofstede, the two countries vary the most in regard to masculinity and individualism (Hofstede, 1987-2003). The largest difference is seen in the Masculinity dimension. Norway appears to focus on relational values which is in opposition to the UK, where more focus is on achievement values (Hofstede, 1987-2003). As shown in Figure 2 below, they are ranked relatively close on the other three dimensions.
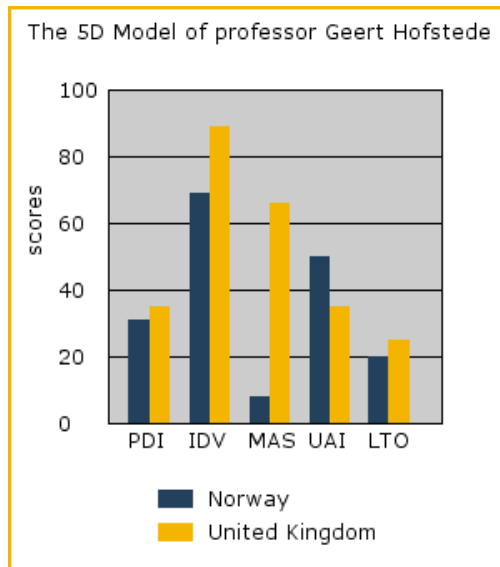
Figure 2: Norway vs. UK (Hofstede, 1987-2003)

Another set of tools which can be used to assess and identify national cultural differences was created by Trompenaars and Hampden-Turner (1997) and follows a similar structure as Hofstede's five cultural dimensions framework. Trompenaars and Hampden-Turner believe that every national culture separates itself from other cultures by the way in which each national culture deals with various dilemmas (Trompenaars & Hampden-Turner, 1997).

Trompenaars and Hampden-Turner categorize dilemmas into three groups: (1) relationships with people, (2) attitudes in regard to time, and finally (3) attitudes towards the environment. There are 7 dimensions, 5 of which fall under the first group dealing with relations with people. These first five dimensions are (1) universalism vs. particularism, which measures whether people prefer a universalist system or a specific social group; (2) individualism vs. community, which measures whether people prefer individual freedom or their community; (3) neutral vs. affective, which measures whether people feel that it is appropriate to show their emotions or if

they tend to show more neutrality and restraint; (4) specific vs. diffuse, which measures whether people engage with others on a personal level or try to keep things more professional and separate; and finally (5) achievement vs. ascription, which measures whether people feel that status is earned or it is ascribed. The last two dimensions are (6) internal vs. external, which deals with the environment and whether people adapt to the environment they are in or try to control it; and lastly, (7) time, which explores how people see the past, present, and future (Trompenaars & Hampden-Turner, 1997). All dimensions may be assessed and compared to gain a better understanding of how various national cultures differ overall.

The two countries that were researched for this thesis and the pilot study, Norway and the UK, appeared to rank similarly on Trompenaars and Hampden-Turner's dimensions, although there were differences (Trompenaars & Hampden-Turner, 1997). In regard to individualism vs. community, although they were relatively close, the UK was ranked as a strong individualism culture, while Norway was somewhat in the middle of the scale, having aspects of both individualism and community within its' culture. In regard to specific vs. diffuse, Norwegians were more likely to engage with others on a more personal level than the UK, who were more likely to keep things professional. However, both were ranked more towards keeping things professional overall. In regard to achievement vs. ascription, both countries disagreed strongly that respect should come from the family background, however Norway disagreed more so than the UK did. And finally, when it came to internal vs. external, Norwegians believed that it was worth trying to control nature more than the UK did, however both scored quite similarly (Trompenaars & Hampden-Turner, 1997).

Both Trompenaars and Hampden-Turner's dimensions and Hofstede's dimensions have been highly praised, and also criticized. Earley, Ang, and Tan (2006) feel that the cultural value dimensions are important to consider when discussing various cultures and cross-cultural work experiences, but they are merely a starting point for evaluation, and should not be used as concluding evidence in anyone's assessment of another culture, or of a specific individual from another culture (Earley, Ang, & Tan, 2006). With specific regard to Hofstede's cultural dimension framework, McSweeney (2002) argued that "*His conflation and uni-level analysis precludes consideration of interplay between macroscopic and microscopic cultural levels and between the cultural and the non-cultural*" (McSweeney, 2002,

p.116).   Overall, the dimensions fail to address specific individuals and how the values associated with their culture will affect their actions and interactions with others (Earley, Ang, & Tan, 2006).

National Culture vs. Corporate Culture

There are two types of culture which can influence an organization: national culture and corporate culture. National culture, discussed in detail above, includes all attributes of an individual or of a group, including their religion, social norms, and traditions (Hofstede G., 1997). Corporate culture includes all the attributes of an individual or group that have to do with work or the work environment. However, the level that an individual plays a role in a corporate culture varies based on the type of corporate culture that exists.

Due to the occurrence of mergers, joint ventures, and international expansion; companies, as well as their employees, have to deal with the complications of new or foreign corporate cultures within the workplace. When a "new" company or location of an already existing company is created, the corporate culture, or the atmosphere in the office and among the employees, is usually one that resembles the owner's national culture or the mother company's corporate culture (Trompenaars & Hampden-Turner, 1997).   Employees' cultural preferences may influence the corporate culture, as will the competitors and core markets that the company deals with on a daily, monthly, or even annual basis.

According to Trompenaars and Hampden-Turner (1997), there are four types of corporate cultures: The family, the Eiffel Tower, the guided missile, and the incubator (Trompenaars & Hampden-Turner, 1997). As you can see in Figure 3 below, the family style corporate culture is person-oriented and hierarchical. In this type of corporate culture, the organization is run similar to that of a traditional home, where there is an authority figure that is in charge of daily operations and makes most or all of the important decisions. This type of corporate culture is difficult to enter into by foreigners, as there are many "inside-jokes" and traditions that are not easily understood by outsiders. Countries that tend to have this type of corporate culture within their organizations are Japan, Italy, and Singapore (Trompenaars & Hampden-Turner, 1997).

The next type of corporate culture, as defined by Trompenaars & Hampden-Turner, is the Eiffel Tower corporate culture. In this type of corporate culture, one's status in a corporation is ascribed to a role, there are many levels of hierarchy and each level has specific duties to supervise and defined responsibility for the duties of the employees at the levels below (Trompenaars & Hampden-Turner, 1997). There is little to no tolerance for personal relationships and favoritism, as all employees are evaluated srtictly on their professional abilities and work performance. Countries that tend to have an Eiffel Tower type of corporate culture are Germany and Austria (Trompenaars & Hampden-Turner, 1997).

Egalitarian

Fulfillment-oriented culture
INCUBATOR

Project-oriented culture
GUIDED MISSILE

Person

Task

FAMILY
Person-oriented culture

EIFFEL TOWER
Role-oriented culture

Hierarchical
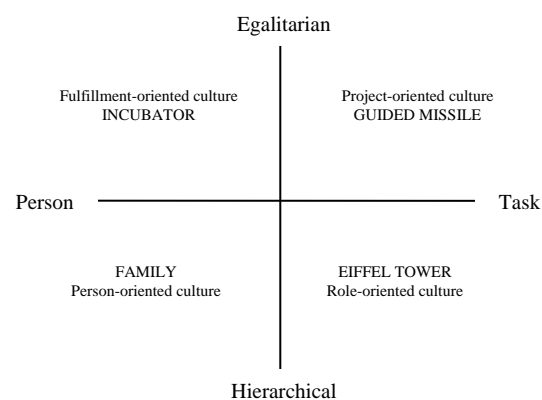
Figure 3: Corporate Images (Trompenaars & Hampden-Turner, 1997, p. 160)

The guided missile corporate culture is the third type of corproate culture and is described as egailtarian, task-oriented, and having a "whatever it takes" attitude towards work (Trompenaars & Hampden-Turner, 1997). The output of each individual in a guided missile corporate culture is theoretical and is not easily measured. The standards of the employees are high and work roles are not strictly defined. An example of a corporation that has had this type of corporate culture is Apple Macintosh. They had a guided missile culture which focused on highly professional and skilled employees working together, motivating each other, and encouraging each other to create a remarkable product: a computer (Trompenaars & Hampden-Turner, 1997).

Finally, the fourth type of corporate culture discussed is the incubator culture (Trompenaars & Hampden-Turner, 1997). In this type of corporate culture, the organization acts as a vessel for each individual to achieve their life goals and to put

focus on themselves first, and the company second. It is both egalitarian and personal, as there is little structure and creativity of individuals is strongly encouraged. Leadership roles in this particular corporate culture are achieved, not ascribed. It is common to find this type of corporate culture in such countries as the USA and England (Trompenaars & Hampden-Turner, 1997).

Both Trompenaars and Hampden-Turner recognize that their complex model, which attempts to characterize a complex paradigm, makes generalizations and the assumption that all foreigners will fit into the stereotypes that fit their cultural background. They also realize that by categorizing corporate culture into four groups, they are not covering all the complexities of varying organizations and their corresponding corporate cultures (Trompenaars & Hampden-Turner, 1997). Although an organization may fit into one of the four types of corporate cultures listed above, there may be examples where the corporate culture overlaps and has attributes of two types of corporate cultures. When utilizing cultural framework, it may be beneficial to remember that organizations in general, but especially those with an international composition, are very complex and the way they operate, motivate, and solve conflict varies from one organization to the next.

The ability to identify a common way of operation in the newly formed work place (one that is created via a joint venture, merger and so on), or more specifically the type of management needed, is key to a successful work environment. This will help recognize and secure the appropriate individuals required to fulfill the important management positions in the "new" company. Potential problems may be avoided if a common understanding of the varying cultures exists.

Cultural Intelligence

Intelligence is described as "*A term referring to a variety of mental capabilities, including the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly, and learn from experience,*" by Thomson Gale (Gale, 1998). Schmidt and Hunter (2000) define intelligence as "*the ability to grasp and reason correctly with abstractions and solve problems*" (Schmidt & Hunter, 2000). Historically, many described intelligence as academic aptitude and

now intelligence is also viewed as aptitude that extends beyond an academic setting (Sternberg & Detterman, 1986).

There are other forms of intelligence other than academic intelligence, such as social intelligence, practical intelligence, and emotional intelligence. Social intelligence, according to Vernon (1933), is the "*ability to get along with people in general, social technique or ease in society, knowledge of social matters, susceptibility to stimuli from other members of a group, as well as insight into the temporary moods or underlying personality traits of strangers*" (Vernon, 1933, p 44; Kihlstrom & Cantor, 2000). Practical intelligence is defined by Sternberg (2000) as the "*ability that individuals use to find the best fit between themselves and the demands of the environment*" (Sternberg, et al., 2000). Emotional intelligence goes beyond academic intelligence and deals with the ability to recognize and deal with personal emotions, without any consideration for varying cultural environments (Ang, et al., 2007). All of the various intelligences are defined differently by researchers and theorists; however the definitions above give a strong foundation of the basic principle behind each separate facet of intelligence.

According to Thorndike, an individual's intelligence may be separated into three divisions: the ability to understand and react to ideas, objects and people (Thorndike, 1920). Building on Thorndike's three-category intelligence theory; Sternberg (1986) stated that there are different degrees of varying intelligence within each individual, or multiple intelligences (Sternberg R. J., 1986). Some individuals may be academically intelligent yet lack in emotional intelligence, therefore doing well in a classroom setting yet at the same time not being able to properly identify the emotions of others. Robert J. Sternberg believes that there are many reasons why people identified as intelligent by academic standards cannot succeed in everyday life, such as lack of motivation or lack of perseverance (Sternberg, 1986). The same can be said for people who are considered culturally intelligent but fail to do well in intercultural settings, due to similar reasons such as a lack of motivation or a lack of ability to adapt.

Cultural intelligence has various meanings which can be seen as complementary to one another. Cultural intelligence is defined as an individual's capability to function and manage effectively in culturally diverse settings or environments (Ang, et al., 2007). That is, cultural intelligence deals with how one is able to adapt and thrive when in an intercultural environment other than the one where

they were socialized, through the use of various traits and skills (Brislin, Worthley, & Macnab, 2006). In relation to Schmidt and Hunter's (2000) definition of general intelligence, cultural intelligence is a type of intelligence that focuses on the ability to grasp, reason, and behave in various intercultural environments (Ang, et al., 2007). Each specific culture determines which behaviors are considered intelligent and which are not in that particular cultural context (Brislin, Worthley, & Macnab, 2006). According to Brislin, Worthley, and Macnab (2006), examples of behavior may include the application of previously learned information, maintaining relationships, and timely consideration of alternative courses of action (Brislin, Worthley, & Macnab, 2006). Cultural intelligence is not just a preferred way of behavior, but a combination of behavior and the actual capabilities that an individual possesses (Mayer, Caruso, & Salovey, 2000).
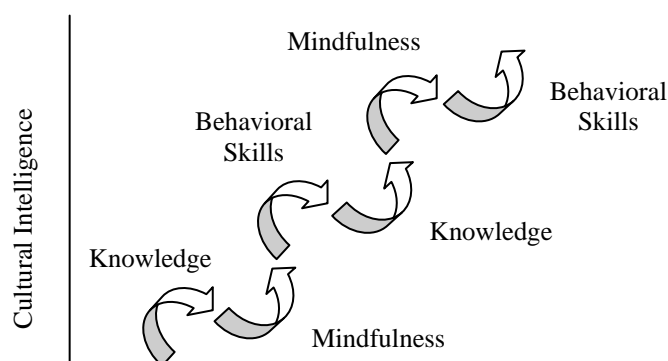
Figure 4: Gaining Cultural Intelligence (Thomas & Inkson, 2003)

Others have different ideas on how to define cultural intelligence, or how to identify traits which culturally intelligent people have. Culturally Intelligent people have three things, according to Thomas and Inkson (2003), and these are knowledge, mindfulness and adaptive behavior (Thomas & Inkson, 2003). More specifically, one must have a sufficient level of knowledge in order to understand cross-cultural differences; one must have the mindfulness to be able to monitor and comprehend cross-cultural situations; and finally, one must have the ability to adapt their behavior in accordance to whatever is appropriate for various cross-cultural situations. Having these three traits creates a foundation for one to have a high level of cultural intelligence (Thomas & Inkson, 2003).

According to Thomas and Inkson (2003), the development of cultural intelligence involves all three components: mindfulness, knowledge and behavioral

skills. Developing cultural intelligence takes a considerable amount of time and is a knowledge acquisition process that occurs via social interaction, international experience, and observation of various cultural contexts (Thomas & Inkson, 2003). This process is illustrated in Figure 4 above. An individual begins with a foundation of knowledge and then goes through knowledge acquisition, all the while remaining observant and aware of differences and appropriate actions and behavior. Next, the individual adapt their behavior to the norms and combines the new norms that they have learned into their new knowledge bank, to be used in future situations (Thomas & Inkson, 2003). Developing cultural intelligence is an ongoing process and is reinforced with each new cultural experience.

In the past, little research focused directly on cultural intelligence, as the number of migrant workers and overseas work assignments was not as high as it is today. Therefore, the idea of being able to adapt to various cultures other than one's own, especially in a work context, was not viewed as an important issue. However, it has always been an important issue, even though it was overlooked by many. Cultural intelligence theory combines the realities of globalization in today's modern world as well as traditional ideas of intelligence (Ang, et al., 2007). Accordingly, the foundation of cultural intelligence is based around various types of intelligence, such as: practical intelligence, academic intelligence and intercultural business communication theory.

Intercultural communication competence (ICC) refers to communication across cultures. Many scholars have tried to define ICC; however, there is still no universally agreed upon definition and so remains an ambiguous term. There are many approaches that researchers have taken in order to define ICC. Geertz (1973) believes that the understanding lies in language and the communication that occurs via speaking and writing, while others, such as Casmir (1999) believe that the understanding lies within an individual's cultural and ethnic identity and the values or beliefs that come with that culture/identity (Casmir, 1999, Geertz, 1973). Although researchers tend to describe ICC in different ways, there are three primary ideas that emerge as a common theme or thread: the competence to develop and sustain relationships, the competence to communicate effectively, and the competence to attain compliance and cooperate with others. Therefore, the three related competencies are advantageous for an individual to possess who is interacting in an intercultural environment (Fantini, 2000).

Many consider Edward Hall to be the forerunner of intercultural communication research (Arasaratnam & Doerfel, 2005). In 1959, Hall was credited for the development of the original paradigm of intercultural communication, which was based on non-verbal forms of intercultural communication. Hall's research highlighted that the ability to be motivated to understand a foreign culture is connected with the ability to display appropriate verbal and non-verbal communication, based on cultural values of specific contexts.

Modern ICC research was put into motion after Hall's initial intercultural communication research findings. The fields of intercultural business communication, i.e. the ability to effectively communicate with people of another culture, and ICC exist on their own, although they overlap often with the field of cultural intelligence. Cultural intelligence plays a large role in ICC research and theory, as it is a competence that may be needed in order to communicate effectively in an international business environment. Neither ICC theory nor intercultural business communication theory are supported with significant empirical evidence.

Currently, the field of cultural intelligence is becoming more prevalent in today's modern and global world. It has its own group of dedicated researchers who strive to understand its depth and meaning. Traditionally, research done on the measurement of cultural intelligence was based on a subject group of sojourners, consisting of foreign exchange students, Peace Corps voluntary workers, and US army personnel. Current researchers use a broader subject pool, which consists of expatriate managers and workers on global work assignments (Black, Mendenhall, & Oddou, 1991).

<div align="center">Cultural Intelligence Measurement</div>

Building upon early work in intelligence and contemporary theories of intelligence, such as those by Sternberg, a dynamic framework to measure cultural intelligence was developed by Earley and Ang (Earley & Ang, 2003). Earley and Ang strived to go beyond Sternberg's work to determine how the various types of intelligence play a role in cultural intelligence, and more specifically, what are the necessary ingredients in order to have a sufficient level of cultural intelligence so that one may succeed in a culturally diverse situation. For example, just being emotionally intelligent would not be sufficient enough to have a strong level of overall cultural

intelligence. Emotional cues are generally constructed emblematically and are shared within a culture; therefore the ability to recognize and react properly to various emotional cues in one's home culture does not always extend into a foreign culture (Earley & Ang, 2003). Thus, a person with high emotional intelligence in one cultural context may not be emotionally intelligent in another culture. The proper mix of varying intelligences will help to ensure a high level of capability to act appropriately in an intercultural environment.

Earley and Ang state that cultural intelligence is based on three areas of intelligence, which they have blanketed under the term CQ (Earley & Ang, 2003). These are cognitive intelligence (which includes metacognitive intelligence), motivational intelligence, and behavioral intelligence. This theory of CQ relies on the assumption that cultural intelligence is not only based on a particular country, or cultural area, but also on an individual basis (Earley & Ang, 2003). Additionally, the CQ framework takes into consideration the various changes that can occur in the environment (Earley & Ang, 2003). Early and Ang believe that an individual should possess a certain level of all three of the intelligences mentioned above in order to be capable of a successful international experience (Earley & Ang, 2003).

Earley and Ang's model of cultural intelligence focuses on three main types of intelligence: motivational, cognitive, and behavioral (Earley & Ang, 2003) (See Figure 5 below). Motivational intelligence refers to "*the mental capacity to direct and sustain energy on a particular task or situation and recognize that motivational capabilities are critical to "real world" problem solving*" (Ang, et al., 2007, p.6). In regard to cultural intelligence, motivational intelligence refers to a combination of an individual's values, efficacy expectations and goals. Individuals with a high level of motivational cultural intelligence have the ability to adapt and learn within new cultural settings due to their innate desire to do so (Ang, et al., 2007). Cognitive intelligence refers to internal knowledge that deals with the processing and reasoning of information (Earley & Ang, 2003). Cognitive cultural intelligence involves being aware of the differences among cultures in regards to basic dimensions of cultural values, such as those put forth by Geert Hofstede: power distance, individualism, masculinity, uncertainty avoidance, and long term orientation (Hofstede, 2001). Behavioral intelligence refers to "*outward manifestations or overt actions: what people do rather than what they think*" (Ang, et al., 2007, p.6). More specifically, the behavioral intelligence part of CQ is about bringing together the cognitive and

motivational intelligence and applying it to "real-world" situations (Earley & Ang, 2003). Individuals with a high level of behavioral CQ are able to act in an appropriate manner in diverse cultural settings in regard to such behaviors as tone of voice, language, greetings, and social gestures (Gudykunst, Ting-Toomey, & Chua, 1988).

In this model, the possession of the three types of intelligence discussed is necessary in combination to produce cultural intelligence. All three types of intelligence may or may not show a relationship with each other, thus the overall CQ represents a collective multi-dimensional construct (Ang, et al., 2007). The model suggests that an individual must be cognitively aware, that is using their acquired knowledge from experiences and education, but also to react and interact appropriately after observing and understanding any given situation (Ang, et al., 2007).

There is a procedure of outside knowledge acquisition that occurs and also a process of knowledge application. In order to have an overall high CQ, according to Earley and Ang, one must *"learn the ways that people act and behave in a new culture and create a new mental framework for understanding what is experienced and witnessed"* (Earley & Ang, 2003, p.61).
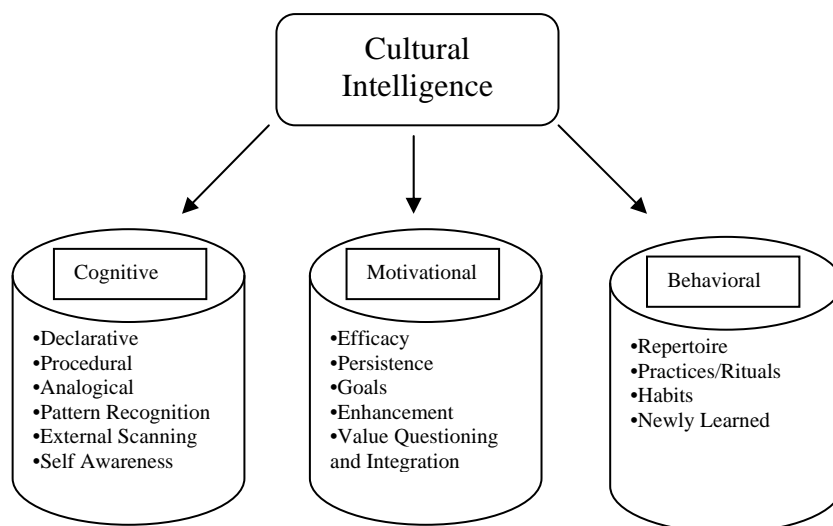
Figure 5: Facets of Cultural Intelligence (Earley and Ang, 2003)

When assessing cultural intelligence in managers and professional employees in the business world, Thomas and Inkson (2003) build upon their general three factor framework, as mentioned above, and go deeper into the three traits of knowledge,

mindfulness and adaptive behavior. A manager who is culturally intelligent, according to Thomas and Inkson (2003), should have a foundation of cultural knowledge in regards to what culture is and how it varies among different countries, places and people. Also, a manager who is culturally intelligent should have the ability to identify and adapt to various displays of appropriate behavior in a variety of settings and circumstances. Finally, a culturally intelligent manager should be able to take the two prior characteristics and build upon them by engaging in a range of appropriate behaviors based on the cross-cultural environment that the manager is in. It is an ongoing process and each new cultural experience builds upon the last, making the manager grow and learn with each different experience, as seen in Figure 6 below (Thomas & Inkson, 2003).
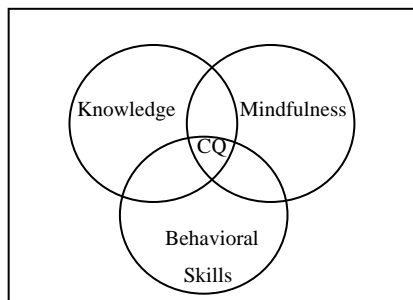
Figure 6: Components of Cultural Intelligence (Thomas & Inkson, 2003)

As the trend of increased globalization continues, this quality of high cultural intelligence will become an even greater asset for individuals to have and for international companies to obtain. According to Harvey, Buckley, and Novicevic, the most important criteria for success in an international business is the workforce. There is a strong need to hire and maintain global leaders and workers who are proficient in global knowledge of international business processes, such as consumer demands and etiquette in various cultures (Harvey, Buckley, & Novicevic, 2000).

In conclusion, the field of cultural intelligence is rather new and the lack of empirical evidence and valid measurements make it difficult to properly identify and measure cultural intelligence and its various attributes. The importance of hiring high quality employees, especially for overseas work assignments, is increasing, as the need for more and more expatriates continues to rise. A failure to identify a candidate with very low CQ potential can result in various negative outcomes, such as loss of profit and decreased efficiency. Conversely, the ability to properly identify a

candidate with strong CQ potential can result in many positive results for an international company, including synergy, increased profits, and overall satisfied employees. There is a clear need for a valid framework which identifies an individual's level of cultural intelligence.

<u>Cultural Intelligence Integration in the Workplace</u>

When the management or the human resource department of a company hires an individual, they usually assess their technical skills and professional qualifications to determine whether or not they would be a good candidate for the company. However, what they do not usually test for is cultural intelligence levels and/or cultural adaptability.

In a study done by Tung in 1981, only five percent of international firms in her sample administered tests to determine whether or not candidates had adequate cross-cultural skills (Tung, 1981). The amount of only five percent is extremely low. This low amount of cross-cultural adequacy measurement could be due to the fact that the world business climate has changed significantly in the past 25 years. If Tung were to repeat her study today, perhaps the results would be different, showing a significant increase in the administration of cross-cultural adequacy assessment tools by international companies.

The idea of cultural intelligence is a relatively new topic which has not been highly prioritized by international companies in the past; however it should be an important issue to international corporations today. Due to the lack of appropriate and valid measures of cultural intelligence, as well as the lack of education and awareness on any existing valid measures, perhaps international companies choose to overlook these cross-cultural skills and focus on identifying the technical and professional skills which can be easily measured. Either way, overlooking cultural intelligence could have consequences. Having a valid measurement tool will play an important role for international companies hiring candidates for overseas positions in the future.

Earley and Ang believe that it is crucial to factor the candidates' cultural intelligence into the equation when hiring a candidate for an international work assignment (Earley & Ang, 2003). Ang and Van Dyne created a questionnaire based on to assess an individual's cultural intelligence level and their potential to succeed in

an international environment prior to an international work assignment (Ang S., Interview, 2007). This questionnaire was developed in relation to Earley and Ang's cultural intelligence framework. The questionnaire will be discussed in detail below.

In evaluating an individual's CQ, Earley and Ang aim to seek out who will *not* be successful in a diverse cultural experience, and not who *will* be the best in a diverse cultural experience. That is, their main focus is to help companies seeking a candidate for an international position to "weed out" the ones who have a low level of cultural intelligence (Earley & Ang, 2003). By doing so, they are able to ideally end up with competitive candidates who have a moderate to high level of CQ and who are more likely to learn from the results of the CQ assessment and focus on the areas where they need improvement. These competitive candidates will be more likely to successfully fulfill the small amount of proper training identified from the CQ assessment to better their cultural intelligence. Furthermore, these competitive candidates will be more apt to thrive in an international environment, ideally bringing success to the company, in terms of team synergy, increased revenue, and increased efficiency levels.

One way that this cultural intelligence may be utilized is through global work assignments (GWAs). A global work assignment is when an individual is sent or moves to another location that is foreign to them, or outside of their home culture, for the purposes of working.

There are two main types of global work assignments. They are an expatriate assignment and an overseas experience. They differ in that an expatriate assignment is initiated by an employer, while an overseas experience is initiated by an individual (Inkson, Arthur, Pringle, & Barry, 1997). An expatriate assignment is directly related to an employee's job and therefore is usually required or strongly suggested to the employee. The overseas experience usually involves an individual who has chosen an assignment abroad because they have an interest in cross-cultural experiences. Both experiences involve cultural exposure and adaptation and both experiences require cultural intelligence in order for success.

When an individual is assigned to hold an expatriate position abroad, they are expected to live and work in a foreign environment. The assignment requires both knowledge of the company's strategies and main business goals, and the procedures and business processes that are used (Inkson, Pringle, Arthur, Barry, 1997). The employee remains within the company but develops relevant skills and builds industry,

regional, and/or national expertise in a foreign location (Arthur & Rousseau, 1996). Last, but certainly not least, the assignment requires the employee to have the ability to work and live successfully in a foreign country (Inkson, Arthur, Pringle, & Barry, 1997).

Global work assignments are important for multinational companies for various reasons. Knowledge sharing and the strengthening of international aptitude within the organization are two of these reasons (Stroh & Caligiuri, 1998; Tung & Miller, 1990). The exchange of knowledge and the building of international competence are achieved through efficient and effective communication among employees. The ability to communicate effectively is helped if there is an understanding of the foreign culture of the people that an individual is in communication with. Therefore, it is important that employees working with colleagues and clients from different backgrounds have a strong level of cultural intelligence so they can achieve success during their global work assignment, for example in the form of effective communication with their foreign colleagues, or an ability to understand and adapt to the opposing culture(s).

The demand for global work assignments is increasing, as well as the need for capable individuals to fill the overseas positions (Earley & Ang, 2003). Unfortunately, the relationship between an individual's cultural intelligence level and their success overseas has not been thoroughly researched and there is little empirical evidence to connect the two directly. However, Earley and Ang have created a diagram to show the theoretical relationship between CQ and success during a global work assignment (See Figure 7 below for detail) (Earley & Ang, 2003, p.212).

The Figure 7 illustrates that there are many varying factors that can make or break an individual's experience overseas. Such factors include how the expatriate's family, personality, the job assignment and the local organization in the foreign environment. Oftentimes, an expatriate's family is expected to travel with them on the global work assignment. It is anticipated that the family will live with the expatriate in the foreign environment and integrate and adjust accordingly to the new culture. Sometimes, spouses and children have a difficult time adjusting and this can create problems for the expatriate. Examples of problems that may occur if a spouse had difficulty adjusting to the new culture are that tension in the household could build, the spouse could return home without the expatriate, and the overall capabilities of the expatriate in regard to cultural intelligence may be compromised. A result may be that

the completion of the job assignment is jeopardized, causing problems for the home and the host company.

Individual	Family	Host Nation	
Personality	Spousal/Children adjustment	Cultural Toughness novelty	

CQ

General Adjustment

+

Completion of Global Assignment

+

Work Performance

+

+

+

+

Technical/ Managerial Competence	Job Design	Parent Local Unit Organization Organization	
Individual	Job	Organization	
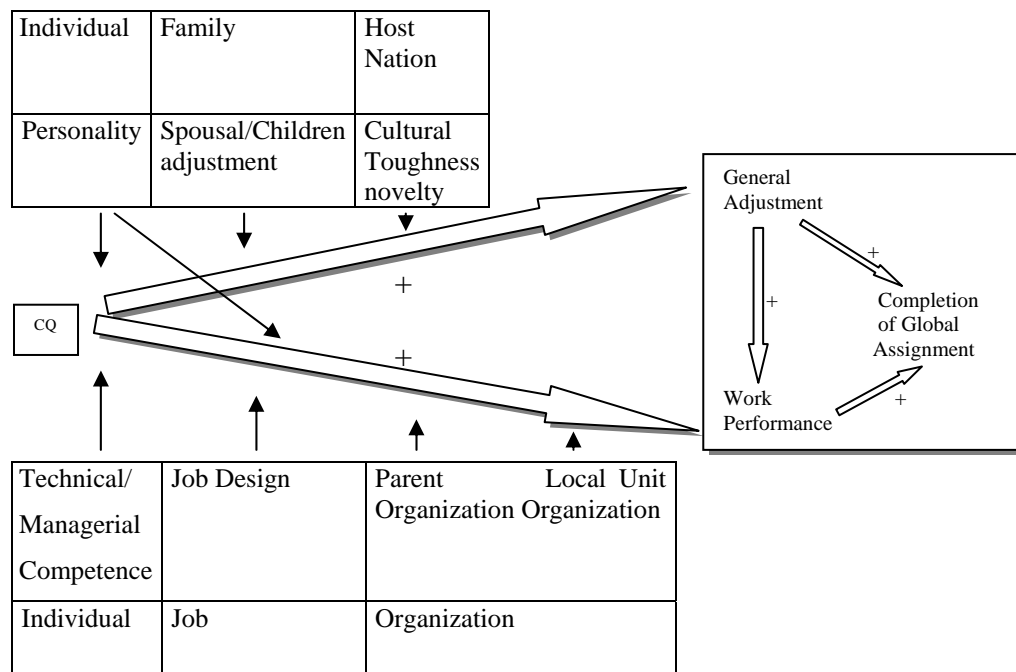
Figure 7: A Multi-level Model of CQ and Success in Global Work Assignments (Earley & Ang, 2003)

Additionally, an individual's personality may have an effect on the cultural intelligence capabilities of an expatriate. If an individual's personality does not allow for them to behave appropriately and accept aspects of the new environment that they are in, the international job completion may again be compromised. Conversely, if an individual has an open-minded view of the world and a personality that is easy going and easily adaptable to various contexts, then their cultural intelligence capabilities may be enhanced.

Also, the job assignment given to the expatriate may hinder or help their overall cultural intelligence capabilities. If the assignment is relevant to the specific technical skills and experience that the expatriate already possess, the ability to succeed in the foreign assignment may be better. Furthermore, if the local host organization is welcoming and organized in a way that is easily understood by the expatriate, success may be more attainable. In conclusion, from this diagram, it is clear that having a high cultural intelligence does not necessarily mean that one will

be successful during a global work assignment. Many factors may hinder or help an individual's cultural intelligence capabilities (Earley & Ang, 2003).

<div align="center">Training and Development of Cultural Intelligence</div>

Training programs and skill seminars focused on cultural differences, stereotypes, adaptation techniques, foreign language, etc. are intended to alleviate any inefficiency that an individual may have and create an overall high quality candidate with strong cultural intelligence. Various training procedures will be discussed in detail in the following section.

Cultural training can be in many forms. For instance, there are courses that are given at educational institutions that focus on various cultural themes, internet training courses and at-home learning kits on specific cultures available online or at bookstores, and training programs that are specifically tailored to organizations and their employees. Also, having an experience in an international environment is great training.

Various educational institutions, such as Wheaton College in Illinois, USA, SUNY Albany in New York, USA and Norges Handelshøyskole in Bergen, Norway, all offer specific college level courses on intercultural business communication. Then there are internet resources such as Communicaid, which has office locations in many European countries, and offers consulting in intercultural skills, foreign language training, and communication skills (Communicaid, 2007).

Additionally, an international company may aid their employees that are about to go on an international work assignment, or that are currently on a work assignment, by providing training. According to Earley and Ang (2003), there is evidence that cross-cultural training can improve expatriate adjustment, relationships in the new culture, and work performance abroad (Earley & Ang, 2003).

The next form of training which is quite informal is personal experience. This could be in the form of experience from a cross-cultural team at work, a foreign travel experience, or interaction with a neighbor from a foreign country. Due to globalization, work performed by groups or work teams is on the rise and the composition of these groups is becoming more complex and diverse (Thomas & Inkson, 2003). Multicultural groups, whether for work purposes or special interest,

offer a unique opportunity to gain cultural intelligence (Thomas & Inkson, 2003). Additionally, interaction with someone from a foreign culture may expose an individual to the norms and appropriate behaviors of that new culture, which they can then take advantage of next time they come into contact with another individual from that same foreign culture. Although this is not a formal way of training in cultural intelligence, it is one of the most inexpensive training methods. According to Thomas and Inkson (2003), this informal training, or the various experiences that an individual has, is what most people rely on to become culturally intelligent (Thomas & Inkson, 2003).

The type of training given to each individual or group of people may vary based on which culture they will be exposed to, the extent to which the new culture differs from the individual or group's own national culture and finally the duration of the exposure. Although some researchers, such as Thomas and Inkson (2003), believe that cultural intelligence is best learned through experience, the formal training offered on cultural intelligence may be classified into three methods. See Table 1 below for detail.

Training Method	Application to CQ
Factual	
Books, lectures, area briefings	Knowledge about specific cultures, culture dimensions, and processes
Analytical	
Films, culture assimilators, sensitivity training	Both culture -general and culture-specific knowledge as well as the opportunity to practice mindfulness
Experiential	
Simulations, field trips, role-playing	Opportunities to practice both mindfulness and behavior skills, and to experience the emotions of cross-cultural interaction

Table 1: Formal Training Methods (Thomas & Inkson, 2003, p 72)

Unfortunately, many firms doubt that there is any connection between cross-cultural training and increased success for the expatriate. Therefore, many firms do not provide cultural training to employees (Earley & Ang, 2003), despite the praise that cultural training receives from many scholars in the field of cultural intelligence.

CHAPTER III

METHOD

Research Questions and Hypotheses

<u>Introduction</u>

An exploratory pilot study was conducted to evaluate methods and to formulate hypotheses to test that had grounding in preliminary experimental data. Two surveys were used in order to evaluate the measurement of cultural intelligence in two cultural groups. A background survey was used to collect data on their background and experience while the other focused specifically on their cultural intelligence capabilities. There were two factors in the study: nationality and gender. The two countries were chosen mainly because they ranked differently on a few of the cultural dimensions from the two framework discussed above, however their rankings were somewhat similar in general.

There is no normative data on how the two nationalities or the two sexes usually score on the cultural intelligence measure used. The assumption was made that all subjects would rate their experience abroad according to their actual success during their international work assignment. An assumption that Norwegians and British often go to the opposite country for work assignments was made. Additionally, it was assumed that all subjects would answer all questions on both measures truthfully and accurately.

<u>Hypothesis</u>

The hypothesis of this project was that subjects who classified their international work experience as positive would get a relatively high cultural intelligence score. From the positive classification, it was assumed that they have demonstrated that they have the adequate level of cultural intelligence capabilities to succeed in an international work environment. Conversely, the subjects who classified their international work experience as negative, or unsuccessful, would score very low on the cultural intelligence measure. Their failure abroad would demonstrate that they

lacked an adequate level of cultural intelligence to succeed in an international work environment.

Subject Recruitment

Subjects were required to be from the UK or Norway and they had to have had some degree of international work experience in the other country (i.e. Norwegians had to have worked in the UK for a period of time and the British had to have worked in Norway for a period of time). Additionally, all participants had to be able to read and comprehend English, as the tests administered were in English. All subjects had to have a high school degree or higher level of educational accreditation. It was intended that there would be an equal number of males and females in the study group, so subjects were selected accordingly to fulfill that goal of equal representation of the sexes.

Although the number of Norwegians working in the UK and the number of British working in Norway can easily be enumerated, it was too difficult to gather a list of all these people. Therefore, subjects were selected via networks and accessible forums online. Norwegian and British subjects were found at Norges Handelshøyskole, through a Yahoo web group for British people living and working in Norway, and via the Master in International Business Program at Norges Handelshøyskole alumni network. Six subjects were approached via email and asked to participate, while the other four were directly approached in person and asked to participate.

Study Group

Data was collected from a total of ten individuals representing two countries: Norway and The United Kingdom. The subject size of ten subjects was chosen and agreed upon by all parties involved, myself and my thesis advisor, as it fit the scope of this Master thesis preliminary research project.

All of the subjects that were asked to participate fit the subject requirements and therefore none of the subjects were excluded from participating. The nature of the study and the expectations for each subject's participation were clearly explained at the time of recruitment. Additionally, all of the material was completed by each

subject in a timely and thorough manner. All information needed from each subject was efficiently submitted either via email or telephone and there was no missing data or any inadequate responses.

Tests and Procedures

Background Questionnaire

The background questionnaire was developed for this thesis and this is comprised of both open-ended and close-ended questions. The questionnaire focused on participants background information (e.g. age, overseas experience, education, how they rated their overseas experience). See Appendix II for full detail. Additionally, the background questionnaire was used to assess the level of success the participant's each felt they had abroad in terms of the experience being ranked positively or negatively. The data was then used in a comparison with the results of the following measure, the CQ Questionnaire$^©$, in an effort to determine if an individual's self-report of success abroad is related to their performance on a measure of cultural intelligence.

Subjects were asked to complete the background questionnaire prior to the completion of the CQ Questionnaire$^©$. The background questionnaire is comprised of eleven questions: seven multiple choice and three that require a written response. Five of the eleven questions focus specifically on each participant's international work experience, while the other six focus on their general background. None of the ten participants were asked to disclose their name, or current location.

The background questionnaire was created in Microsoft word and was entirely in English. There were no Norwegian translations of the background questionnaire available to the subjects.

CQ Questionnaire

Cultural intelligence was assessed using the CQ Questionnaire$^©$, developed by Soon Ang and Linn Van Dyne (See Appendix I for full detail). The CQ Questionnaire$^©$ is intended to be used to measure cultural intelligence levels in relation to the three areas of Earley and Ang's cultural framework: cultural strategic

thinking, behavioral intelligence, and finally motivational intelligence (Earley, Ang, & Tan, 2006). This questionnaire was used to collect data on the abilities that each participant had in regard to cultural capability and cultural intelligence, as defined by Ang and Dyne's model.

The CQ Questionnaire© is a closed-ended questionnaire which forces the subject to pick one of two answers to each question. The CQ Questionnaire© is comprised of two sections: section A and section B. Section A has thirty-four questions while section B has twenty questions, which equals a total of fifty-four questions overall. Each question directly relates to cultural strategic thinking, behavioral intelligence, or motivational intelligence. Twenty-five of the fifty-four questions relate to cultural strategic thinking, sixteen of the fifty-four relate to motivational intelligence and thirteen of the fifty-four relate to behavioral intelligence. Each of the three sections is tallied and then added together to get a total score (as seen in Table 2). Each question has a value of 3 points, making the total maximum score possible a 162.

	CST	MOT	BEH	Total
Subtotal from Section A				
Subtotal from Section B				
Total (Sections A + B)				

Table 2: CQ Score Sheet (Earley, Ang, & Tan, 2006)

The scores for each of the three categories is totaled separately and these scores are assessed based on the scoring guidelines for the CQ Questionnaire© as seen in Appendix I. Based on the scores, each individual is able to see if they have scored in the red alert category (which categorizes them as having a poor level of CQ and in need of substantial training or development in that particular area in order to be a good candidate for an overseas experience), the average category (which means they have an average level of CQ in that particular area and could use some training in order to increase their CQ level to an excellent level), or the excellent category (which means they are well equipped with the CQ level needed to adapt and thrive in an international work environment) (Earley, Ang, & Tan, 2006).

One of the main goals of this questionnaire is to identify which areas of cultural intelligence an individual should improve in (for example the areas where they score a red alert or an average) and which areas are they strong in (for example

areas where they score an excellent) (Earley, Ang, & Tan, 2006). It is used to assess an individual's capabilities in regard to adjustment in a foreign culture. The CQ Questionnaire$^©$ is used in this study to identify if the subjects have strong levels of CQ and if they are attractive candidates who possess the abilities needed in regard to CQ levels to succeed in an international work environment.

It is unknown if the questionnaire assesses the capabilities effectively and accurately. There is not any normative data available to the public on the CQ Questionnaire$^©$ at this time. Therefore, the self-report of success or non-success in the international work environment from the background questionnaire on whether the subjects had a negative or positive experience abroad was compared to the results of the CQ Questionnaire$^©$. Then it could be determined if the CQ Questionnaire$^©$ actually relates to the factor of self-report of success or not. It is also unknown whether or not the CQ Questionnaire$^©$ is sensitive or discriminating to subjects who have had a successful international work experience and those who have not.

The CQ Questionnaire$^©$ is used as a tool to assess the *capability* of individuals and not to determine their actual levels of performance. The CQ Questionnaire$^©$ appears to be a potential predictor of an individual's capabilities to adjust in an international work environment. The fifty four questions used in the questionnaire appear to measure information that refers to cross cultural experience, therefore, potentially having face validity with subjects.

<u>Procedure</u>

All subjects completed two surveys that were delivered to subjects via postal mail or email. The first was a background survey and the second was the CQ Questionnaire$^©$, created and copyrighted by Linn Van Dyne and Soon Ang.

The questionnaires were administered in the autumn of 2007 and each subject was given two weeks to complete both forms. Both questionnaires were given to each participant and then they were directed to complete the background questionnaire first, then the CQ Questionnaire$^©$. Brief directions were given for the background questionnaire, which simply were to "*fill out the background questionnaire by choosing the correct or best answer that describes you, and then fill in the written answer when it asks you to*." No additional directions were given for the CQ

Questionnaire[©] as directions were included in the word document that was emailed to each participant.

Two of the ten participants returned their completed questionnaires in a PDF format while the other eight participants returned their completed questionnaires in a word document. Some checked the answers that they chose, while others simply highlighted the answers in word or put them into a bold font. All answers were easily recognizable despite the variability in how each participant chose to mark their answers.

Non-Standard Test Administration

All of the subjects in the subject group completed their questionnaires in the time given, except for one participant. This one subject had just given birth and required three weeks to complete the required material. Notification of the delay was given promptly and this created no problem for the overall completion of the study. Other than that one variation, there were no deviations from the original plan of the study and all participants remained available for further questioning, if needed.

DATA ANALYSIS

The scores were plotted to evaluate for normality. After all scores were plotted, it was evident that the scores were skewed. There was no evidence of a bell-shaped curve from the plotted scores of the subjects. The graph of scores was evaluated visually for outliers. There was an obvious outlier who scored well below the rest of the subject group. The questionnaires were inspected for researcher accuracy in scoring. No errors were found. Descriptive statistics of range and mean were determined first with all subjects included and then repeated without the subject with an extremely poor score on the CQ Questionnaire[©].

An analysis for homogeneity of variance was conducted to evaluate the reasonableness of comparing various groups within the study sample (e.g. males to females, and Norwegians to British) on CQ performance. Correlation was used to do a preliminary look at the relationships between the three subscales of the CQ and the total CQ score.

CHAPTER IV

RESULTS

Demographics

The ages of the participants ranged from age twenty to above forty-nine. There were six male and four female subjects in the study. All participants completed some college or obtained a college or a graduate degree. All participants have worked or are working in a foreign country. All participants have lived in at least two countries during their lifetime and at least two different locations (e.g. city, town, state, and province).

Normality and Homogeneity of Variance

The pilot study consisted of 10 subjects. The CQ score of one of the male subjects in the United Kingdom group is considered an outlier. The limited number of subjects makes it unrealistic to test for a normal distribution of scores among different variables (i.e. male vs. female, and UK vs. Norwegian groups). Increasing the number of subjects in a future study would increase the likelihood of the data meeting normality of distribution. The pilot study was unbalanced in that there were three females in the Norwegian group and only one female in UK group.

Homogeneity of variance was tested using the F-test for males versus females, and UK versus Norwegian citizens. There were two significant findings. The homogeneity of variance for males versus females for CQ Score was significant (P=0.03) when the analysis was done after the removal of the outlier British subject. Females demonstrated more variability in their CQ scores than males. In addition, homogeneity of variance for the Norwegian versus the UK group was a significant finding even in this extremely small number of subjects (P=0.01). There was a significantly higher variability in CQ scores for the Norwegians in comparison to the UK group who were more uniform in their scores after the removal of the outlier score. Further analysis for homogeneity of variance of the Norwegian and UK study groups on the subscales of the CQ Questionnaire were all non-significant. The small number of subjects and unbalanced distribution of male and female subjects within

the two country groups precluded further statistical analysis of the groups using ANOVA or regression techniques. Results must be interpreted with caution because of a possible confound of the higher performance of the Norwegian females, females outnumbered Norwegian males in the study group and the number of subjects was small.

Analysis of Background Questionnaire

All but one of the participants have lived and worked in a foreign country for five or more years, while one participant has lived and worked abroad for less than one year. Eight out of the ten participants identified cultural obstacles while they were abroad, while the other two participants did not identify any cultural obstacles.

The cultural obstacles identified by the Norwegian participants working in the UK included the following areas of noted differences; sense of humor, manners (e.g. a more polite demeanor in regards to holding doors and standing in queues), ways of showing respect, political opinions, religion, social rules, language, banking system which is less modern than the Norwegian banking system, and social attitudes towards drinking and alcohol. The cultural obstacles identified by the British working in Norway included the following; a different language, the Norwegian people are more reserved, more difficult to meet new people, different meal times, different attitudes towards work, a time consuming decision making process, a different outlook on life and society, and driving on the opposite side of the road. As one British participant explained;

> "Not speaking Norwegian made it difficult to find employment initially. I was already learning Norwegian but took advice from Aetat. They suggested I continued learning Norwegian but also found myself a practice place to help with language skills. After this I learnt Norwegian relatively quickly and was in a better position to look for employment."

One of the four participants who scored a moderate CQ score overall, who is Norwegian, said the following in regard to the cultural obstacles he identified during his international experience in the UK;

"I wouldn't call them "obstacles" but simply different ways of doing things from what you are used to in your home country. For example, the British banking system is a bit behind Norway's and this created some problems initially with getting things paid etc. But this is quickly fixed by learning about it and adapting/ deal with it accordingly. The main cultural divide happens when you meet a group of people with a similar UK background and you don't have the same cultural background to immediately appreciate their exact point of view. As a general rule however, when looking at "how to overcome cultural differences" it was very important to learn more about the culture in question. One way to learn about it is to read about a country's history, their official religion, their government institutions & how their society is build up, what the main exports are etc... Because when you become more familiar with another culture, you can easier accept it and deal with it effectively."

In terms of business obstacles that were identified by the participants, only two out of the ten participants identified obstacles that occurred in their international business environment. The business obstacles identified by the one British participant were difficulties due to the different language, the need to discuss everything as a group before making decisions, and finally, people not willing to take individual responsibility. One British participant who did not identify any international business obstacles gave an example of how he avoided obstacles in an international business environment.

"I met a Sheikh in the bar of a hotel in Dubai one evening to enjoy a beer and we were both dressed casually. The next day at our official business meeting I was dressed in my regulation dark grey suit and he in his dish dash. More formalities were observed of course, including cultural traits important for him as a Saudi, but whilst respecting his culture I was still being very English."

This particular British man was able to conduct himself appropriately in a professional setting with a distinct corporate culture while still being aware of the different national cultures from which he and the new foreign colleague came from. Therefore, he successfully avoided any obstacles that could have arisen if he had not had this awareness of appropriate behavior in the two settings.

The business obstacles identified by the one Norwegian participant were a dissimilar sense of humor, manners, ways of showing respect, interests, political opinions, religions, and finally, dissimilar social rules. One Norwegian participant stated;

"You have to be somewhat conscious of these differences to not unnecessarily offend anybody or create misunderstandings. So not necessarily planning rigorously what to say but rather approach social settings with caution and respect, and maybe even somewhat objectively until you know the person better from a cultural and personal perspective."

It is common for both the cultural obstacles identified and the business obstacles in the foreign country identified to overlap. One British participant explained this situation, as stated below;

"Whilst always respectful of local culture and traditions the primary reason for my exposure to other cultures (other than Norway) is actually job related. Marine insurance is very heavily influenced by London and the Anglo American way of doing things. In that respect my "Englishness" has been an advantage rather than a hindrance and I tend to meet people at some kind of half way house when conducting business, i.e. I make allowances for culture and so does my counterpart. I guess I find myself in some kind of international melting pot where formal cultural niceties are replaced by common commercial interests. Of course success may be in the detail at the end of the day and I'm sure that if no effort was made on my part to adapt where I felt it necessary and where my experience told me that it is the correct thing to do then I would not have achieved the same levels of success and acceptance – this also applies to Norway by the way."

In regard to how the participants ranked their experience abroad, all cited that their experiences were positive. Not one participant gave a negative rating of their overseas experience. There were various reasons why each participant ranked their experience as positive. Some of the British participants ranked their experiences in Norway as positive due to the high standard of living, "hytte på landet" which is the ability to have a summer home and a winter home, the great environment for the expatriate's family, especially their children, the opportunities for self development and achievement, the relaxed attitude towards work hours, and an excitement about the cultural differences that exist. One British participant said that her experience was positive mainly due to the fact that she has a Norwegian partner and has made a life here with him, as well as completed courses and taken on a new career.

The reasons that the Norwegian participants gave in regards to their positive ranking of living and working in the UK were that they get along very well with their co-workers, they have more opportunities to take their career to an international level, they have the ability to develop more confidence within diverse social arenas, they

enjoy the cultural differences and finally they are fond of the opportunity to learn and adapt to the new etiquette and way of life in the UK.

The positive or negative ranking, in this case all positive, that each participant self-reported in regards to their experience overseas was used as a measure against the CQ results from the CQ Questionnaire$^{©}$. As seen in Figure 8 below, the ranking from the background questionnaire on each participants experience abroad has been labeled as success (positive ranking) or failure (negative ranking).

On the x-axis is the CQ Questionnaire$^{©}$ scoring range. A score of 95 or below is labeled a red-alert situation, which suggests that an individual must seek a significant amount of training in order to be considered an attractive candidate for an overseas experience. A score of 96 to 125 means that an individual has a moderate level of cultural intelligence and needs some training in order to have the ability to work in diverse cultural settings. Finally, a score above 125 infers that an individual has excellent levels of cultural intelligence capabilities and would ideally be a great candidate for an overseas work experience (Earley, Ang, & Tan, 2006).
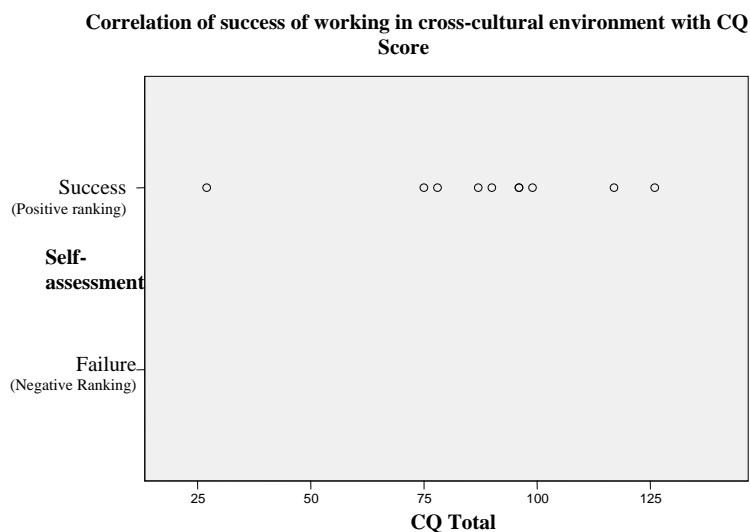
Figure 8: Correlation of Success Abroad with CQ Score

Five of the ten participants scored a red-alert CQ score overall of 95 or below; one of the four red-alert scores was a 27, which is significantly low and is the outlier of the subject group, while the other four scores were between 75 and 90. Two participants had an overall moderate CQ score of 96, which is just one point above the red-alert category, while two participants scored in the moderate range with scores of

99 and 117, respectively. Finally, one participant scored in the excellent category with a 126, just one point above the moderate category (See Appendix III for scores).

As stated before, not one of the ten participants felt that they had a negative work experience abroad. When comparing their own ranking of their experience abroad to the CQ scores, there was little correlation. Five out of the ten participants had a situation of red-alert when it came to their CQ score (three British and two Norwegian).

When five of the ten subjects were asked to comment on the discrepancy between their experience and their scores on the CQ Questionnaire©, four participants responded similarly and one responded differently. The four participants who were red-alert were confused on how the CQ Questionnaire© gave them a poor score, and more specifically, how they could be considered red-alert when most of them continue to hold an international position in Norway or the UK, respectively. They all felt that they adapted well to the new environment and overcame any obstacles that they faced, as discussed in the previous sections. Although, when asked if they would consider taking cultural training, as none of them had had cultural training previously, all said they would not be opposed to it.

The one participant who responded differently was Norwegian and has not been working abroad for many years now, and felt that his low score may be appropriate for him today. Therefore, the score may be an accurate assessment of his current level of cultural intelligence, as his success during his international work experience was many years ago. Therefore, four out of the five red-alert participants did not feel that their low CQ score properly reflected their current level of cultural intelligence.

In the background survey, only three of the ten participants claimed to have prior cultural training, while the other seven claimed to have had none. This seemed to be linked to the CQ scores, as seen in Table 3 below. The three participants that had previous cultural training scored either an average CQ ranking or an excellent CQ ranking, which means that neither of the two participants had a red-alert CQ score (See Appendix IV for further detail).

			CQ Results			
			need to develop	average	excellent	Total
Training	N	Count	5	2	0	7
		% of Total	50.0%	20.0%	.0%	70.0%
	Y	Count	0	2	1	3
		% of Total	.0%	20.0%	10.0%	30.0%
Total		Count	5	4	1	10
		% of Total	50.0%	40.0%	10.0%	100.0%

Table 3: Training vs. CQ Cross Tabulation

The one participant who had prior training and scored in the excellent range for CQ is a Norwegian female who has been working in the UK for five or more years, is between the age of 30 and 39, has a graduate degree, and has lived in nine or more locations throughout her life. The two participants who also had training and scored a moderate level of CQ are both male, have been living abroad for five or more years, are between the ages of 30 and 39, and have a graduate degrees. However, one of these two participants is from the UK and has lived in five to eight different locations throughout his life, while the other participant is from Norway and has lived in nine or more locations throughout his life. The cultural training that the Norwegian female and male claimed to have was a cultural awareness class with her employer and a Master in International Business from the Norwegian School of Management (incl. two years in UK) which included a multi-cultural awareness course, respectively. The British male claimed to have cultural training from a graduate course at Norges Handelshøyskole during his Master Degree. All three candidates appeared to benefit from their prior training as none of them had a red alert score in any of the three categories in the CQ Questionnaire[©] . This implies that having cultural training will improve one's cultural intelligence and suggests that this training will make the individual a more attractive candidate for an international work experience.

CQ Analysis by Country with the Outlier

When analyzing the CQ scores by country, the UK vs. Norway, and including the one outlier who was from the UK, the following results were noted, as seen on Table 4 below.

Participant	CST Total	MOT Total	BEH Total	CQ Total
British mean	34.2	22.8	22.2	79.2
Norwegian mean	40.2	29.4	29.4	99

Table 4: CQ Scores by Country with Outlier

The mean for the CST score for the British participants was 34.2 while the mean for the Norwegian participants for CST was 40.2. Therefore the British CST mean was 6.0 lower than the Norwegian CST mean. In regard to MOT, the mean for the British participants was 22.8, while the mean for the Norwegian MOT mean score was 29.4. Therefore the British MOT mean score was 6.6 lower than the Norwegian MOT mean score. Additionally, the Norwegian mean for BEH was 29.4 while the British mean was 22.2. The BEH mean was 7.2 higher for Norwegians. The overall CQ score mean for the Norwegians was also higher, coming in at 99, while the overall British CQ mean was 79.2. From the results, it appears that there may be a relationship between Norwegians and higher CQ scores when compared to the British scores (See Appendix V for further variances). Additionally, it appears as though there is a higher variance between the British scores than the Norwegian scores, as seen in Table 5 below.

CQ F-Test Two-Sample for Variances with Outlier		
	UK	*Norway*
Mean	79.2	99
Variance	866.7	517.5
Observations	5	5
df	4	4
F	1.674782609	
P(F<=f) one-tail	0.314807135	
F Critical one-tail	6.388232909	

Table 5: CQ Overall Analysis by Country with Outlier

CQ Analysis by Gender with the Outlier

Next, the two sexes were compared to assess for variability. Again, the British outlier, who is a male subject, was included in the analysis. See Table 6 below.

Participant	CST Total	MOT Total	BEH Total	CQ Total
Males mean	33	24.5	23.5	81
Females mean	43.5	28.5	30	101.25

Table 6: CQ Scores by Gender with Outlier

For CST, the female participants mean was 10.5 points higher than the male mean. For MOT, the female participants mean was 4 points higher than the males mean, and finally for BEH, the female participants mean was 6.5 points higher than the male participants mean. Additionally, the overall CQ mean score for the female participants, which was 101.25, was higher than the overall CQ mean score for males, which was 81. Therefore, the female mean for all three categories, CST, MOT, and BEH, was higher than the male mean. There was high variation for both groups, however there was a higher variation seen among the male scores than the females. See Table 7 below for detail.

CQ F-Test Two-Sample for Variances with Outlier		
	Males	*Females*
Mean	81	101.25
Variance	756	584.25
Observations	6	4
df	5	3
F	1.293966624	
P(F<=f) one-tail	0.443006583	
F Critical one-tail	9.013455168	

Table 7: CQ Overall Analysis by Gender with Outlier

CQ Analysis by Country without the Outlier

When the CQ scores were analyzed without including the outlier, the results varied slightly. See Table 8 below for detail.

Participant	CST Total	MOT Total	BEH Total	CQ Total
British mean	40.5	27	24.75	92.95
Norwegian mean	40.2	29.4	29.4	99

Table 8: CQ Scores by Country without Outlier

The mean for the CST score for the British participants was 40.5 while the mean for the Norwegian participants for CST was 40.2. Therefore the British CST mean was .3 higher than the Norwegian CST mean. In regard to MOT, the mean for the British participants was 27, while the mean for the Norwegian MOT scores was 29.4. Therefore the Norwegian MOT mean was 2.4 higher than the British. Additionally, the Norwegian mean for BEH was 29.4 while the British mean was 24.75. The difference in the BEH means was 4.65, putting the Norwegians ahead again. The overall CQ score mean for the Norwegians was also higher, coming in at 99, while the overall British CQ mean was 92.25. From the results, it appears that the British scores were considerably less variable than the Norwegian scores. This is a very large change from the results when the outlier was included. See Table 9 for detail.

CQ F-Test Two-Sample for Variances without Outlier		
	UK	*Norway*
Mean	92.25	99
Variance	20.25	517.5
Observations	4	5
df	3	4
F	0.039130435	
P(F<=f) one-tail	0.011829519	
F Critical one-tail	0.109683011	

Table 9: CQ Overall Analysis by Country without Outlier

CQ Analysis by Gender without the Outlier

Next, the two sexes were compared to assess for variability and the outlier, who was male, was not included in the sample. See Table 10 below for detail.

Participant	CST Total	MOT Total	BEH Total	CQ Total
Males mean	37.8	28.2	25.8	91.8
Females mean	43.5	28.5	30	101.25

Table 10: CQ Scores by Gender without Outlier

The female mean for all three categories, CST, MOT, and BEH, was higher than the male mean. For CST, the female participants mean was 5.7 points higher than the male mean. For MOT, the female participants mean was 0.3 points higher than the males mean, and finally for BEH, the female participants mean was 4.2 points higher than the male participants mean. Additionally, the overall CQ mean score for the female participants, which was 101.3, was higher than the overall CQ mean score for males, which was 91.8. However, the male participants CQ scores in general were less variable than the female participants were. See Table 11 below for detail.

F-Test Two-Sample for Variances without Outlier		
	Males	*Females*
Mean	91.8	101.25
Variance	70.2	584.25
Observations	5	4
df	4	3
F	0.120154044	
P(F<=f) one-tail	0.034060125	
F Critical one-tail	0.15171325	

Table 11: CQ Overall Analysis by Gender without Outlier

Overall, the MOT scores for both sexes and countries (if you exclude the outlier) were very similar, which may be explained by the fact that all candidates were

educated and had had prior international experience. However, if the outlier is included in the data, there is significant variance between both sexes and countries.

It cannot be concluded that Norwegians do significantly better than British on the CQ Questionnaire©. Nor can it be concluded that females do better than males on the CQ Questionnaire©, due to the lack of homogeneity of variance. Additionally, there is a confound in the data in that there is only one female subject in the British group and three in the Norwegian group. All of these factors, including the small sample size, make it unrealistic to draw conclusions.

CQ Analysis of Correlations

The CQ and CQ sub scores were analyzed in order to explore the relationships between CQ and the three sub-categories: CST, MOT and BEH. First, the scores were compared by country, as seen below in Tables 12 and 13.

UK (Includes Males and Females)			
	CST	*MOT*	*BEH*
MOT	0.49		
BEH	0.64	0.29	
CQ	0.91	0.77	0.72

Table 12: Correlations by Country, UK

In regard to the British CQ and CQ sub scores, the CST score has the highest correlation with overall CQ. A correlation of 1 is the highest that can be achieved, and the CST correlation with CQ is .91. The MOT scores correlate with overall CQ at .77, which is the 2nd highest correlation among all three sub scores. And finally, BEH has the lowest correlation with CQ, with a correlation level of .72. In general, the British results for all three sub scores had an above average correlation with overall CQ.

Norwegian (Includes Males and Females)			
	CST	*MOT*	*BEH*
MOT	0.61		
BEH	0.19	-0.21	
CQ	0.93	0.82	0.22

Table 13: Correlations by Country, Norway

Norwegians were different from the British when it came to the relationships between their CQ sub scores and overall CQ. As with the British, the CST scores had the highest correlation (.93). Also, MOT had an above average correlation with overall CQ with a .82. However, BEH scores showed very low correlation with overall CQ with a .22.

Next, the CQ and CQ sub scores were analyzed by gender. See Tables 14 and 15 for detail on both genders.

Males (from both Norway and UK)			
	CST	*MOT*	*BEH*
MOT	0.44		
BEH	0.57	0.31	
CQ	0.87	0.78	0.70

Table 14: Correlation by Gender, Male

When looking at the male sample, CST was again the sub score that showed the highest correlation with .87 to overall CQ. MOT and BEH showed fairly high to above average correlation with overall CQ with a .78 and .70 correlation, respectively.

Females (from both Norway and UK)			
	CST	*MOT*	*BEH*
MOT	0.80		
BEH	0.13	-0.06	
CQ	0.94	0.88	0.31

Table 15: Correlation by Gender, Female

The female sample showed strong correlation between the CST sub scores and overall CQ with a correlation of .94, which was the highest correlation of all in all subject groups. MOT also showed high correlation with overall CQ with a .88; however BEH showed a low correlation with overall CQ with a .31.

In general, CST scores were more highly correlated with the overall CQ scores than any other sub scores. The second most highly correlated sub scores with overall CQ was MOT, with an average overall correlation between .77 and .88. In regard to the BEH sub scores, there was extremely low correlation to the overall CQ scores. The British and the male BEH scores had a high correlation with CQ overall, however the Norwegian BEH scores, as well as the Female BEH scores, showed low correlation with overall CQ scores with a .22 and a .31, respectively.

The differences of variation in correlations among genders and countries may be due to a few main factors. The study group was very small and the distribution of subjects was unbalanced. The female participants are 3 Norwegians and one British. There appears to be a potential relationship between females and greater variation in performance on the CQ Questionnaire[©].

Summary of Results

The results of this study varied and there was one main outlier who stood out from the other subjects. On the whole, the subjects used in this study were very aware of the fact that there were differences in the two cultures, yet none had any significant difficulty in identifying and adapting to the differences. As one British participant stated;

> "In brief, I have of course made a strong effort to adapt to the Norwegian lifestyle; both in terms of language, food, holidays, pastimes etc and would at least appear to have achieved a certain degree of success, both privately and professionally. The longer I stay in Norway, the more English I become actually, but one thing that this has to do with is self confidence and the fact that the Norwegian lifestyle is no longer foreign to me and therefore I feel more comfortable being myself."

CHAPTER V

DISCUSSION

Cultural intelligence is the ability to understand cultural differences and act appropriately in accordance to various cultural contexts. The foundation of cultural intelligence appears to be a mixture of different intelligences, such as social and practical intelligence. There are various frameworks that are used to assess cultural differences and to assess the levels of cultural aptitude that an individual possesses. Most of these tools used to asses these cultural differences are used on a national level, and are often criticized for the lack of consideration for sub-cultures and for contributing to generalizations and stereotypes.

The characteristics that an individual should possess in order to be able to be culturally intelligent vary based on each researcher's views. However, all of the criteria reviewed above have a similar foundation, which is that all the characteristics should complement each other to make an overall strong candidate for cultural intelligence. Additionally, all the characteristics begin with the ability to acquire knowledge and develop a knowledge foundation. Then an individual should have the ability to observe and understand behavior, and finally the ability to adapt the learned behavior based on the certain cultural context that an individual is in.

Cultural intelligence can be developed through experience and/or through training. An individual can gain knowledge from an experience in a team with an international composition or through an international work assignment. Also, there are various types of cultural training that an individual can participate in to gain cultural insight, such as corporate sponsored job-specific training, culture assimilators, or lectures. The more an individual is exposed to various cultural contexts, through experiences and training, the more knowledge they may acquire, resulting in a potential increase in their overall cultural aptitude.

In review of the literature, the concept of cultural intelligence remains largely open-ended as so little has been tested empirically.

The pilot study was conducted as an opportunity to work out methods issues and to formulate hypotheses to test that had grounding in preliminary experimental

data. In essence, the pilot study was used to generate questions, not answers. The intention was to pick out the most important questions and focus on those areas in future research.

The CQ Questionnaire$^{©}$ was used in the pilot study, as well as a background survey. The background survey was used as a measure to gauge the accuracy and validity of the CQ Questionnaire$^{©}$. Results from the ten participants in this study varied and there was one outlier who did not fall in line with the consistency that the other participants had. The strong predictors in this study were gender and nationality. Of all the scales within the CQ Questionnaire$^{©}$, CST was most highly correlated with overall CQ.

The female participants represented forty percent of the total sample. The data from this pilot study suggest that women may be more capable than males when it comes to understanding similarities and differences across cultures. Additionally, from the results above, it appears that females are generally more likely to have the ability to adapt their behavior appropriately in intercultural environments and have higher overall cultural intelligence levels. The females scored on average higher than the male participants in all categories except for MOT, which may be due to the fact that all participants, male and female, appeared to be highly motivated as they had higher education and completed international work experience. On the other hand, the females were much more variable than the males were when it came to their overall scores. Furthermore, for the females the BEH scale had extremely low correlation to overall CQ. For such a small sample, this was an interesting observation. It appears that just using the CST scale would be almost as strong as using all three scales of the CQ Questionnaire$^{©}$ to determine overall CQ for females. However, due to the small sample size, and lack of normative data, further testing is necessary.

In regard to the two countries, Norway and the UK, the Norwegians scored higher overall than the British did, however the British were less variable in their answers than the Norwegians were. This is a significant finding which may be attributable to the varying factors identified by the national cultural dimensions above in the literature review for each country. However, this interpretation is made with caution because of the unbalanced country and gender groups. But it suggests that Norwegians are significantly more variable in their total CQ scores when compared to the British.

All three candidates who had received some form of cultural training appeared to benefit from their prior training as none of them had a red alert score in any of the three categories in the CQ Questionnaire$^{©}$. Therefore it appears that having cultural training will improve an individual's cultural intelligence and/or make them a more attractive candidate for an international work experience. Again, as this is a pilot study, a more extensive study with a larger number of subjects with and without training is necessary to test this emerging trend. However, if this is in fact a solid finding, it will be critical for international companies to take the theory of cultural intelligence seriously and employ cultural training to those employees going abroad.

<div align="center">Limitations of the Study</div>

The decision to use the factor of success against the CQ scores as a measurement for the CQ Questionnaire$^{©}$ accuracy was a limitation. The participants ranked their experience abroad as negative or positive, and from that, it was determined that positive meant that the participant was successful and negative meant that the participant was unsuccessful. If a sliding scale for failure and success was used instead, perhaps the study would have resulted in more accurate information about the relationship between self report of success and the CQ score.

Despite the weakness of the success measure, the cultural ability that the participants relayed via the background questionnaire and the follow up questioning may not have been reflected properly in the CQ assessment. Four participants who clearly identified and overcame cultural obstacles, had the motivation to adapt to the new culture and the appropriate behavior to successfully carry out an international work experience were identified by the CQ Questionnaire$^{©}$ as red-alert candidates. This appears to be inaccurate and may demonstrate that the CQ Questionnaire$^{©}$ does not take into consideration all factors in regard to cultural intelligence and the ability to properly succeed in an international work assignment.

Another issue with the CQ Questionnaire$^{©}$ is that the language used in the questionnaire was confusing to a few of the participants used in this pilot study. A requirement of each participant was that they were literate in the English language. All ten participants acknowledged that they were literate in the English language prior to the commencement of the study. However, four out of the ten participants had to

ask the administrator of the study, myself, what the word "neophyte" from question 18 of Section A on the CQ Questionnaire$^©$ meant. The other six out of the ten participants may have had trouble with this word as well, but did not notify the administrator of any problem. The four participants who did have an issue with the language on question 18 of the CQ Questionnaire$^©$ were given the definition "*a novice*" from the administrator of the study, myself, as a response. All four participants continued with the CQ Questionnaire$^©$ without any other notifications of any problems.

There is no normative data publicly available for males, females, British or Norwegians. There is also no normative data publicly available for different levels of education. This hindered the ability to make any concrete conclusions.

Also, all of the subjects have a high level of education and have international experience. Not only would a larger sample be needed to make concrete conclusions, but also individuals who do not have a high level of education and who have not had any international work experience. Also, subjects that would rank their international work experience as negative need to be used in further study. This increase in sample size and change in requirements would make it possible to identify whether this group of people that was used in this study is unusual or whether they represent the greater population.

Further Research

This pilot study had many limitations, however the soft findings that the preliminary study suggests are that future research should look at the effects of gender as much as the country of origin. Additionally, the effects of training should be further explored as results showed that training may contribute to increased cultural aptitude.

In regard to the CQ Questionnaire$^©$, the accuracy of self report for the assessment of whether or not the employees felt their experience to be positive or negative should be evaluated. It may have more meaning if in a further study, a comparison of the self report and an employer's assessment of the employee's performance was done. Attaining employer's measurements on an individual's performance, success, and cultural adaptability may give improved accuracy in regard to the success or failure rating. Also, the factors that contribute to a failed international experience may be identified. By involving the employers, the

opportunity to create an awareness of the implications of cultural intelligence and cultural training within an international company is greater.

Additionally, for further study, using other measures, perhaps from the psychology field (e.g. measures of personality, affect, intelligence, and social anxiety) may be beneficial to use to measure factors that may contribute to cultural intelligence in individuals. These psychology measures would be superior to use because they have been tested already for normality, reliability and validity. Using such measures as these would be an interesting way to test the CQ Questionnaire[©] and assess how it relates to individuals scores on psychology measures. Therefore the factors of success and training would not be the only factors being examined.

Furthermore, it may be the case that having the Norwegians fill out survey forms in a non-native language affected the results. Perhaps it would benefit further studies to include questionnaires in the participant's native language and potentially eliminate the confusion due to misunderstandings of words within the surveys. This could be an issue for cross cultural research in the future.

In conclusion, this was a preliminary pilot study with the intent to identify factors that contribute to success in the cross cultural workplace. At the beginning of the study, it was very unclear what factors should be considered to use to relate to the CQ Questionnaire[©]. However, after assessing the relationship between self-reported success or non-success in an international work environment and CQ scores, I have a better idea of what a reasonable approach would be to look further into cultural intelligence factors.

A number of questions and methods were discussed and based on the lack of solid empirical evidence; further study is needed to make concrete conclusions on the cultural intelligence measure used in this study, the CQ Questionnaire[©], as well as the soft findings that came from this study. The research done in this study sets the stage for future research in cultural intelligence, which was the intent.

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APPENDIX I

A Self Assessment of Your CQ[2]

OVERVIEW

The following questions are about dealing with cultural diversity. There are no right or wrong answers. Instead, the questions simply allow you to assess your preferences, desires, and habits. Thinking about these questions can help you understand your unique strengths and how you relate to people with different cultural backgrounds that you meet both in your own country and in other societies.

Read each question carefully and choose either a or b. Do not think too long about any question. If you cannot decide on a particular answer, skip the question and come back and answer it at the end.

SECTION A

Which of the following choices best describes you when you are in situations characterized by cultural diversity? Circle either a *or* b (not both) for each question to indicate which better describes you as you are most of the time.

1. Would you rather work with someone who is from
   a. The same or a similar culture, or
   b. A very different culture?

2. When you are with a person from a different culture, do you
   a. Plan what you say, or
   b. Act spontaneously?

3. Do you like to
   a. Travel in your home country, or
   b. Travel to faraway places?

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[2] ©Linn Van Dyne and Soon Ang

4. When you know you will be meeting someone from a different culture, do you

    a. Script what you want to say before you start, or

    b. Treat them as you would any other person from your own culture?

5. Do you typically

    a. Assume many roles, or

    b. Adopt one primary role?

6. At parties with people from diverse cultural backgrounds, do you

    a. Mimic other people, or

    b. Maintain your own style?

7. In your daily work, would you prefer a job in a culture that is

    a. Similar to your own, or

    b. Different from your own?

8. When thinking about understanding people from different cultures, are you

    a. An expert, or

    b. A novice?

9. Do you view yourself as

    a. Beginning to learn more about culture, or

    b. Having lots of cultural expertise?

10. When speaking to people from diverse cultures, do you use a

    a. Consistent speaking style, or

    b. Variety of accents?

11. Would you say you are

    a. Not really aware when people are from other cultures, or

    b. Very aware when people are from other cultures?

12. Which best describes you?

    a. I read more than two languages, or

    b. I read one or two languages

13. Are you

    a. Alert to the possibility that someone might be from a different culture, or

    b. Indifferent that someone might be from a different culture?

14. When you are in groups of people who have diverse backgrounds, do you

    a. Usually stick to your normal way of speaking, or

    b. Change the way you speak depending on the group?

15. When you work on a project, do you find you prefer to work with

    a. People from similar cultures, or

    b. People from different cultures?

16. When you are with people who have a different cultural background, do you

    a. Think about the differences, or

    b. Forget they are different?

17. In getting a job done, which describes you better?

    a. I am indifferent to working with people from other cultures.

    b. I celebrate cultural differences.

18. When it comes to knowing how to cope with cultural diversity, would others say you are

    a. Very knowledgeable, or

    b. A neophyte?

19. In your spare time, would you choose to

    a. Upgrade your technical skills, or

    b. Learn about cultural differences?

20. Given the choice, would you select working with people who are

    a. Not that competent technically, but are from similar cultures, or

    b. Technically *very* competent, but from *very* different cultures?

21. In terms of knowing how to navigate new cultures, do you see yourself as

    a. Highly experienced, or

    b. At the entry level?

22. Do you tend to

    a. Be aware that people from another culture are different, or

    b. Pay very little attention to whether or not they are different?

23. Is it your habit

    a. Not to plan in advance when interacting with those from different cultures, or

    b. To take charge of your interactions when with those from different cultures?

24. Do you typically

    a. Stick to your own mannerisms, or

    b. Modify your mannerisms when you talk with people from different cultures?

25. Would you rank working with people from different cultures as

    a. One of your many interests, or

    b. A top interest?

26. Do you

    a. Eat what is familiar to you, or

    b. Try what others eat when having meals with people from other cultures?

27. Are you more likely to

    a. Set clear goals before you start working with others from different cultures, or

    b. Work with them as if they were your regular colleagues?

28. When you have to meet strangers from another culture, do you

    a. Go with the flow and according to the situation, or

    b. Carefully plan your conversation in advance?

29. Would you say that you enjoy

    a. Striking up conversations with culturally diverse people, or

    b. Having conversations with those who are more familiar?

30. In your work, do you

    a. Use a uniform style of interacting with everyone in the group, or

    b. Change the way you interact depending on the cultural backgrounds of those in the group?

31. In business situations that require cross-cultural negotiations, do you have

    a. Deep knowledge, or

    b. Basic knowledge?

32. When visiting different cultures, do you

    a. Modify the way you dress, or

    b. Dress the way you do in your home country?

33. When conflicts arise with those from other cultures, do you

    a. Learn from failures and build on successes, or

    b. Pay little attention to cultural sources of failures and successes?

34. In keeping a conversation going with someone from another culture, do you

    a. Have difficulty dealing with ambiguity and differences, or

    b. Deal successfully with ambiguity and differences?

SECTION B

Imagine that you are in a situation where you are interacting with people from different cultural backgrounds. Circle the answer (a or b) that best describes you.

35. In culturally diverse situations, you are
    a. Spontaneous
    b. Planful.

36. In culturally diverse situations, you are
    a. Predictable
    b. Flexible.

37. In culturally diverse situations, you feel
    a. Involved
    b. Indifferent.

38. In culturally diverse situations, you are
    a. Systematic
    b. Casual

39. In culturally diverse situations, you are
    a. Neutral
    b. Engaged.

40. In culturally diverse situations, you have
    a. Cultural knowledge
    b. Technical knowledge.

41. In culturally diverse situations, you
    a. Anticipate
    b. React.

42. In culturally diverse situations, you are a

    a. Learner

    b. Professional.

43. In culturally diverse situations, you feel

    a. Highly interested

    b. Somewhat interested

44. In culturally diverse situations, you

    a. Go with the flow

    b. Prepare in advance

45. In culturally diverse situations, you are

    a. Reserved

    b. A good actor

46. In culturally diverse situations, you are

    a. Broad

    b. Narrow

47. In culturally diverse situations, you are

    a. Excited

    b. Neutral

48. In culturally diverse situations, you are

    a. Current

    b. Dated

49. In culturally diverse situations, you are

    a. Unsure

    b. Energized

50. In culturally diverse situations, you are

   a. Confident

   b. Uncertain

51. In culturally diverse situations, you

   a. Speak one language

   b. Speak many languages

52. In culturally diverse situations, you are

   a. Experienced

   b. A novice

53. In culturally diverse situations, you view interaction as

   a. An activity

   b. A priority

54. In culturally diverse situations, you are

   a. Conscious

   b. Unaware

SCORING INSTRUCTIONS

Section A

For each item, score a 3 in the box to the right of the item if your answer corresponds to the letter shown in the answer column. Add up the columns at the bottom of the page to get your cultural strategic thinking (CST), cultural motivation (MOT), and cultural behavior (BEH) scores.

Question	Answer	CST	MOT	BEH
1	b		☐	
2	a	☐		
3	b		☐	
4	a	☐		
5	a			☐
6	a			☐
7	b		☐	

Question	Answer	CST	MOT	BEH
8	a	☐		
9	b	☐		
10	b			☐
11	b	☐		
12	a			☐
13	a	☐		
14	b			☐
15	b		☐	
16	a	☐		
17	b		☐	
18	a	☐		
19	b		☐	
20	b		☐	
21	a	☐		
22	a	☐		
23	b	☐		
24	b			☐
25	b		☐	
26	b			☐
27	a	☐		
28	b	☐		
29	a		☐	
30	b			☐
31	a	☐		
32	a			☐
33	a	☐		
34	b			☐
		══	══	══

Section B

For each item, score a 3 in the box to the right of the item if your answer corresponds to the letter shown in the answer column. Add up the columns at the bottom of the page to get your cultural strategic thinking (CST), cultural motivation (MOT), and cultural behavior (BEH) scores.

Question	Answer	CST	MOT	BEH
35	b	☐		
36	b			☐
37	a		☐	
38	a	☐		
39	b		☐	
40	a	☐		
41	a	☐		
42	b	☐		
43	a		☐	

44 b	☐	
45 b		☐
46 a	☐	
47 a		☐
48 a	☐	
49 b		☐
50 a		☐
51 b		☐
52 a	☐	
53 b		☐
54 a	☐	

Worksheet

	CST	MOT	BEH
Subtotal from Section A			
Subtotal from Section B			
Total (Sections A + B)			

Overall Cultural Intelligence

Overall Cultural Intelligence (CQ^{TM}) = Total CST + Total MOT + Total BEH

Write your overall Cultural Intelligence (CQ^{TM}) score here: _____

Interpretation of Your Overall CQ^{TM} Score

Your Score	Interpretation
126 and above	You have **excellent** overall CQ in your ability to work in diverse cultural settings (domestic and/or international)
95-125	You have **average** overall CQ in your ability to work in diverse cultural settings (domestic and/or international)
94 and below	You **need to develop** your overall CQ to be able to work more effectively in diverse cultural settings (domestic and/or international)

Interpretation of Your Cultural Strategic Thinking (CST) Score

Your Score	Interpretation
51 and above	You are **excellent** in your cultural strategic thinking
38-50	You are **moderate** in your cultural strategic thinking
37 or less	Your cultural strategic thinking indicates a **red alert**.

Interpretation of Your Cultural Motivation (MOT) Score

Your Score	Interpretation
45 and above	You are **excellent** in your cultural motivation
38-44	You are **moderate** in your cultural motivation
37 and below	Your cultural motivation indicates a **red alert**.

Interpretation of Your Cultural Behavior (BEH) Score

Your Score	Interpretation
30 and above	You are **excellent** in your cultural behavior
21-29	You are **moderate** in your cultural behavior
20 and below	Your cultural behavior indicates a **red alert**.

VARIABILITY IN YOUR SCORES

If your scores vary ("excellent"; "moderate"; "red alert") across the three facets of cultural intelligence, you should think of ways that you can capitalize on your strong areas ("excellent") and ways that you can improve in areas where your scores are "moderate" or "red alert."

APPENDIX II

Assessment of the Background of the Participant

1. What is your age?
    a. ( ) 20-29
    b. ( ) 30-39
    c. ( ) 40-49
    d. ( ) 49 and above

2. What is your educational background?
    a. ( ) Not completed high school or equivalent
    b. ( ) High school only
    c. ( ) Some college
    d. ( ) Graduate degree

3. What is your sex?
    a. ( ) Male
    b. ( ) Female

4. How many countries have you lived in during your lifetime?
    a. ( ) 1
    b. ( ) 2-3
    c. ( ) 4-5
    d. ( ) 6 or more

5. How many different places have you lived (towns, homes, etc) during your lifetime?
    a. ( ) 1
    b. ( ) 2-4
    c. ( ) 5-8
    d. ( ) 9 or more

6. Have you had any formal training in the field of cultural differences and/or intercultural business communication skills? If yes, please explain.

    a. ( ) Yes

            _____

            _____

            _____

    b. ( ) No

7. How many years have you worked in Norway (for the UK participants)/ the United Kingdom (for the Norwegian participants)?

    a. ( ) Less than one year

    b. ( ) One to two years

    c. ( ) Two to five years

    d. ( ) More than five years

8. Did you identify any cultural differences that created obstacles for you? If yes, please name one (or more) and how you overcame it (them) or didn't (For example, the different language, navigating around the new area, etc).

    a. ( ) Yes

            _____

            _____

            _____

            _____

    b. ( ) No

9. In regards to your business environment, did you identify any obstacles that hindered you from fitting in with co workers and in the organization? If yes, please explain.

    a. ( ) Yes

            _____

            _____

            _____

    b. ( ) No

10. Overall, would you rate your experience working in Norway/the United Kingdom as positive or negative?

    a. ( ) positive

    b. ( ) negative

11. Why? (from Q10 above)

    _____

    _____

    _____

    _____

APPENDIX III

Results of CQ Questionnaire© and Background Questionnaire for all Subjects

Subject	CST Total	MOT Total	BEH Total	CQ Total	Age	Education	Sex	Countries lived in	Places lived in	Training	Years in UK	Years in Norway	Cultural Obstacles Identified	Business Obstacles Identified	Experience Neg or Pos
AB	9	6	12	27	49 and above	Some college	M	2 to 3	5 to 8	N	NA	5 or more	No	No	Positive
BB	45	33	18	96	30-39	Graduate	M	2 to 3	9 or more	N	NA	5 or more	Yes	No	Positive
CB	33	33	30	96	30-39	Graduate	M	2 to 3	5 to 8	Y	NA	5 or more	Yes	Yes	Positive
DB	36	30	21	87	30-39	Graduate	F	2 to 3	5 to 8	N	NA	5 or more	Yes	No	Positive
EB	48	12	30	90	30-39	Graduate	M	2 to 3	5 to 8	N	NA	5 or more	Yes	No	Positive
mean	40.5	27	24.75	92.3											
AN	51	39	36	126	30-39	Graduate	F	4 to 5	9 or more	Y	5 or more	NA	Yes	No	Positive
BN	57	33	27	117	20-29	Graduate	F	2 to 3	5 to 8	N	< 1 year	NA	Yes	Yes	Positive
CN	36	39	24	99	30-39	Graduate	M	2 to 3	9 or more	Y	5 or more	NA	Yes	No	Positive
DN	27	24	27	78	49 and above	Some college	M	4 to 5	5 to 8	N	5 or more	NA	Yes	No	Positive
EN	30	12	33	75	30-39	Graduate	F	2 to 3	2 to 4	N	5 or more	NA	No	No	Positive
mean	40.2	29.4	29.4	99											

Subject	CST Total	MOT Total	BEH Total	CQ Total
Males				
BB	45	33	18	96
CB	33	33	30	96
EB	48	12	30	90
CN	36	39	24	99
DN	27	24	27	78
mean	37.8	28.2	25.8	91.8
Females				
DB	36	30	21	87
AN	51	39	39	126
BN	57	33	27	117
EN	30	12	33	75
mean	43.5	28.5	30	101.25

APPENDIX IV

CQ Questionnaire[©] and Background Information Interpretation
CQ Interpretation * Training * CST Interpretation * MOT Interpretation * BEH Interpretation

BEH Interpretation	MOT Interpretation	CST Interpretation				Training		Total
						N	Y	N
red alert	red alert	red alert	CQ Interpretation	need to develop	Count	1		1
					% of Total	100.0%		100.0%
			Total		Count	1		1
					% of Total	100.0%		100.0%
		moderate	CQ Interpretation	average	Count	1		1
					% of Total	100.0%		100.0%
			Total		Count	1		1
					% of Total	100.0%		100.0%
excellent	red alert	red alert	CQ Interpretation	need to develop	Count	1	0	1
					% of Total	50.0%	.0%	50.0%
				average	Count	0	1	1
					% of Total	.0%	50.0%	50.0%
			Total		Count	1	1	2
					% of Total	50.0%	50.0%	100.0%
		moderate	CQ Interpretation	need to develop	Count	1		1
					% of Total	100.0%		100.0%
			Total		Count	1		1
					% of Total	100.0%		100.0%
	moderate	excellent	CQ Interpretation	excellent	Count		1	1
					% of Total		100.0%	100.0%
			Total		Count		1	1
					% of Total		100.0%	100.0%
moderate	red alert	red alert	CQ Interpretation	need to develop	Count	2		2
					% of Total	100.0%		100.0%
			Total		Count	2		2
					% of Total	100.0%		100.0%
		excellent	CQ Interpretation	average	Count	1		1
					% of Total	100.0%		100.0%
			Total		Count	1		1
					% of Total	100.0%		100.0%
	moderate	red alert	CQ Interpretation	average	Count		1	1
					% of Total		100.0%	100.0%
			Total		Count		1	1
					% of Total		100.0%	100.0%

APPENDIX V

Statistical Analysis of CQ Questionnaire[©] Results and Background Information

I. CQ Overall Analysis

Table of Means				
	CST	MOT	BEH	CQ
UK-All	34.20	22.80	22.20	79.20
UK-w/o outlier	40.50	27.00	24.75	92.25
UK-female	36.00	30.00	21.00	87.00
UK-male w/o	42.00	26.00	26.00	94.00
Norway	40.20	29.40	29.40	99.00
Norway-females	46.00	28.00	32.00	106.00
Norway-males	31.50	31.50	25.50	88.50
All	37.20	26.10	25.80	89.10
All w/o outlier	38.00	27.67	25.00	90.67
All females	43.50	28.50	29.25	101.25
All males	33.00	24.50	23.50	81.00
All males w/o outlier	37.80	28.20	25.80	91.80

II. CQ Analysis by Country

a. With the Outlier

CQ F-Test Two-Sample for Variances with Outlier		
	UK	*Norway*
Mean	79.2	99
Variance	866.7	517.5
Observations	5	5
df	4	4
F	1.674782609	
P(F<=f) one-tail	0.314807135	
F Critical one-tail	6.388232909	

CST F-Test Two-Sample for Variances with Outlier		
	UK	*Norway*
Mean	34.2	40.2
Variance	236.7	173.7
Observations	5	5
df	4	4
F	1.362694301	
P(F<=f) one-tail	0.385772777	
F Critical one-tail	6.388232909	

MOT F-Test Two-Sample for Variances with Outlier		
	UK	*Norway*
Mean	22.8	29.4
Variance	164.7	132.3
Observations	5	5
df	4	4
F	1.244897959	
P(F<=f) one-tail	0.418506386	
F Critical one-tail	6.388232909	

BEH F-Test Two-Sample for Variances with Outlier		
	UK	*Norway*
Mean	22.2	29.4
Variance	61.2	24.3
Observations	5	5
df	4	4
F	2.518518519	
P(F<=f) one-tail	0.196412305	
F Critical one-tail	6.388232909	

b. Without the Outlier

CQ
F-Test Two-Sample for Variances without Outlier

	UK	Norway
Mean	92.25	99
Variance	20.25	517.5
Observations	4	5
df	3	4
F	0.039130435	
P(F<=f) one-tail	0.011829519	
F Critical one-tail	0.109683011	

CST
F-Test Two-Sample for Variances without Outlier

	UK	Norway
Mean	40.5	40.2
Variance	51	173.7
Observations	4	5
df	3	4
F	0.293609672	
P(F<=f) one-tail	0.170909192	
F Critical one-tail	0.109683011	

MOT
F-Test Two-Sample for Variances without Outlier

	UK	Norway
Mean	27	29.4
Variance	102	132.3
Observations	4	5
df	3	4
F	0.770975057	
P(F<=f) one-tail	0.432540731	
F Critical one-tail	0.109683011	

BEH F-Test Two-Sample for Variances without Outlier		
	UK	*Norway*
Mean	24.75	29.4
Variance	38.25	24.3
Observations	4	5
df	3	4
F	1.574074074	
P(F<=f) one-tail	0.327603985	
F Critical one-tail	6.591382117	

III. <u>CQ Analysis by Gender</u>

    a. <u>With the Outlier</u>

CQ F-Test Two-Sample for Variances with Outlier		
	Males	*Females*
Mean	81	101.25
Variance	756	584.25
Observations	6	4
df	5	3
F	1.293966624	
P(F<=f) one-tail	0.443006583	
F Critical one-tail	9.013455168	

CST F-Test Two-Sample for Variances with Outlier		
	Males	*Females*
Mean	33	43.5
Variance	198	159
Observations	6	4
df	5	3
F	1.245283019	
P(F<=f) one-tail	0.456500048	
F Critical one-tail	9.013455168	

MOT
F-Test Two-Sample for Variances with Outlier

	Males	Females
Mean	24.5	28.5
Variance	170.7	135
Observations	6	4
df	5	3
F	1.264444444	
P(F<=f) one-tail	0.451113889	
F Critical one-tail	9.013455168	

BEH
F-Test Two-Sample for Variances with Outlier

	Males	Females
Mean	23.5	29.25
Variance	51.9	44.25
Observations	6	4
df	5	3
F	1.172881356	
P(F<=f) one-tail	0.477776734	
F Critical one-tail	9.013455168	

b. Without the Outlier

CQ
F-Test Two-Sample for Variances without Outlier

	Males	Females
Mean	91.8	101.25
Variance	70.2	584.25
Observations	5	4
df	4	3
F	0.120154044	
P(F<=f) one-tail	0.034060125	
F Critical one-tail	0.15171325	

CST		
F-Test Two-Sample for Variances without Outlier		
	Males	*Females*
Mean	37.8	43.5
Variance	74.7	159
Observations	5	4
df	4	3
F	0.469811321	
P(F<=f) one-tail	0.239350563	
F Critical one-tail	0.15171325	

MOT		
F-Test Two-Sample for Variances without Outlier		
	Males	*Females*
Mean	28.2	28.5
Variance	110.7	135
Observations	5	4
df	4	3
F	0.82	
P(F<=f) one-tail	0.411155266	
F Critical one-tail	0.15171325	

BEH		
F-Test Two-Sample for Variances without Outlier		
	Males	*Females*
Mean	25.8	29.25
Variance	25.2	44.25
Observations	5	4
df	4	3
F	0.569491525	
P(F<=f) one-tail	0.294038944	
F Critical one-tail	0.15171325	

IV. <u>CQ Analysis of Correlation</u>

UK (Includes Males and Females)			
	CST	*MOT*	*BEH*
MOT	0.49		
BEH	0.64	0.29	
CQ	0.91	0.77	0.72

Norwegian (Includes Males and Females)			
	CST	*MOT*	*BEH*
MOT	0.61		
BEH	0.19	-0.21	
CQ	0.93	0.82	0.22

Norwegian Females			
	CST	*MOT*	*BEH*
MOT	0.91		
BEH	-0.39	0.02	
CQ	0.93	1.00	-0.02

Females (from both Norway and UK)			
	CST	*MOT*	*BEH*
MOT	0.80		
BEH	0.13	-0.06	
CQ	0.94	0.88	0.31

Males (from both Norway and UK)			
	CST	*MOT*	*BEH*
MOT	0.44		
BEH	0.57	0.31	
CQ	0.87	0.78	0.70

*Only two Norwegian male subjects, so no test run on these two separately.