

The Connection Between Psi and Volitional Competence in a Non-Western Culture

BACKGROUND AND CONCEPT

Over a hundred years of research in parapsychology has offered good support, especially using meta-analysis, for the existence of psi functioning, but we know little about controlling psi production, and we have made scant progress in learning how to train psi ability. We know that the process of psi involves rich mentation, including attention, intention, and acting, but these ideas have not been analyzed sufficiently. Importantly, in asking a person to affect a target or to guess a target, we are asking the person to engage in the use of volition, but we do not understand this concept very well. It has been a relatively understudied concept for over sixty years in psychology. For us to increase our control of psi, and for us to develop strategies to train people in psi functioning, we need to study what might be called volitional styles and volitional competence.

Prof. Robert Morris has had a long-standing interest in psi and volition research (Morris, 1993; Morris, Nanko, and Phillips, 1982; Gissurason and Morris, 1995), and he and Dr. Deborah Delanoy have been developing the Volitional Competency Questionnaire for the past several years as a first step to meet this challenge, working in Scotland and in Germany. It is important to note that they have discovered interestingly different nuances in the expression of volition in these two European countries, supporting the idea that volition is a culturally rich concept. They were surprised to find, for instance, that few Germans claimed to have thought about having personal goals, so the personal aspect of striving for a goal was muted there. However, these differences make sense when we understand that we have developed our notion of volition through socialization. Therefore, we cannot ignore cultural differences when we try to understand this central psychological concept and its relevance for parapsychology.

There are further reasons to study volition within a cross-cultural context. One of the more robust findings in parapsychology is the sheep-goat effect (Lawrence, 1993), which says that belief in one's ability to perform on the specified task increases the likelihood that one will be successful. But, surely, what one believes about success on a specific test is in part due to culture, to what the culture says is possible--which people can be successful, what kinds of targets are good, what tasks allow for psi functioning, what conditions are psi-conducive, etc. Beliefs about these aspects of psi functioning seem to be culturally dependent. Although there have been a few psi experiments performed in non-Western cultures (Edge, Morris, Palmer & Rush, 1986), and in spite of the single most significant score on an ESP test published in a parapsychology journal having been produced by an Australian Aborigine (Rose, 1952), the cross-cultural aspect of psi has been understudied. But, we cannot hope to be successful in comprehending psi

as a general human ability without being sensitive to the cultural factors. In a few cases, sensitives from non-Western cultures have come to the West, such as Lalsingh Harribance (Roll, et al, 1973), and they have performed successfully, but we have not been able to understand how they were able to succeed in the psi tasks.

Thus, it seems important to understand the concept of volition in a greater cross-cultural context. In the modern western world, this concept has been central and has been understood within the paradigm of an atomistic self: it is the way the self carries through on motivation and "reaches out" to the external world and acts. However, this notion of an internal, atomistic self who wills as a central trait is not held by most non-Western cultures. Fajans (1985) has pointed out, for instance, that the Baining of Papua New Guinea "do not seem to see themselves as agents in their own right" (p. 392), and Australian Aborigines as adults will deny that they are acting out of a private will (Myers, p. 122).

Balinese culture presents an excellent place to study a non-Western concept of volition, not only because I previously carried out investigations there (Edge, 1993; Edge, 1994; Edge, 1995; Edge, 1996; Edge, 1997; Edge, 1998) and have developed contacts, but also because of the uniquely rich and extensive literature on Balinese psychology (Bateson, 1972; Bateson and Mead, 1942; Geertz, 1979; Jensen and Suryani, 1992; Suryani and Jensen, 1993; Lansing, 1974). Although individuality in Bali is important, and thus they are well aware of individual uniqueness, Balinese culture seems to be an example of what trans-cultural psychologists call a collectivist culture, where people define themselves in terms of their relatedness to others as opposed to thinking of themselves as independently separate, as we do in the West. Thus, it is not at all clear that autonomous volition is valued highly in Bali; and if it is, it must be understood in a different way from the Western conception. While competition between villages is strong, individual striving is muted. The Balinese understand the notion of willpower (Ole, p. 104, 1996), but also believe that all power ultimately comes from God. Therefore, the place of volition has become problematized: What is the place of volition in this society in which self-will is muted? How do the Balinese conceive of volition, and what psychological theories do they employ to account for human agency? What volitional competencies are important to them? Insofar as volition is expressed, it must be conceptualized in interestingly distinct ways compared to the West.

Wierzbicka (1983) has argued: "...despite the very considerable differences between different folk psychologies that have been described in the literature, the idea of "person" who "thinks," "wants," "feels," and "knows" (as well as "says" and "does" various things) appears to be universal" (p. 213), so volition is conceptualized in some way in all cultures. Undoubtedly, some cognition is tied to physical actions and needs, while the rest is more culturally dependent. This is where volition and psi intersect. A person must believe that exerting one's will in a psi task can be efficacious, but this belief depends on the understanding of how psi is defined in a particular worldview, how it works, and what strategies can be successfully employed.

This project studies the correlation between volition, including volitional strategies, and beliefs about psi functioning in Bali by gathering data through developing and administering an appropriately reconstructed version of the Volitional Competence Questionnaire, as well as through interviews, so that we can begin to understand volition and its relation to psi more fully in a cross-cultural context.

METHODOLOGY

In order to take advantage of the work already done by Prof. Morris and Dr. Delanoy in their studies at Freiburg and Edinburgh Universities, while at the same time being sensitive to the extreme cultural differences between Balinese and European cultures, I followed Morris and Delanoy's initial approach in Freiburg. Beginning in January, 1999, I spent six months in the field, three months in Bali (on two separate trips), and three months in Edinburgh at the Koestler Lab. Focusing first on the questionnaire, I spent the first two months in Edinburgh, discussing the development of previous questionnaires with my consultant Deborah Delanoy, and Robert Morris; researching the literature in self-efficacy to add to my base of questions on volition; and crafting questions on volition specific for Balinese culture. I took 74 questions from the Edinburgh pool of questions from which the VCQs in Edinburgh and Freiburg had been developed. Five additional questions were added from the Edinburgh PIF. An additional eleven questions derived from my research into the literature of self-efficacy, questions that had correlated to volitional competence in small-scale research in the US and Europe (but had not been covered in the pool of Edinburgh questions). Finally, I added three questions that referred specifically to the Balinese worldview. Thus, I went to Bali with a questionnaire of 93 questions for the Balinese Volitional Competency Questionnaire (BVCQ).

I. Translation

Prof. Suryani had the 93 questions translated by her son into Indonesian. We then went over each question and talked about it. We rewrote most of the questions since the original translation was pretty literal and often it didn't sound right in Indonesian. There were three further problems we encountered in this initial process. The first one I will just mention here and will talk about it in more detail later: the Balinese (as is true in many non-EuroAmerican cultures) tend to talk and think in more concrete, context-related ways, rather than in more abstract, context-free ways. Thus, asking questions about personality traits was often awkward to the Balinese. Additionally, the direct translation often didn't capture the meaning of the English, or it was unclear in Indonesian. Anyone familiar with translation recognizes this problem. The geography of one language often does not map well into the other language. A great deal of time was at this stage was spent discussing the assumptions and theoretical assumptions behind common phrases in English. This process took several long sessions.

Finally, more specifically, there was a problem in translating the word "volition" into Indonesian. (We chose to develop the BVCQ in Indonesian, rather than Balinese, because younger people in the urban areas of Bali are sometimes sufficiently unfamiliar with Balinese now.) There was no general word that seemed to specifically equate with "volition," so we decided to use three words in describing the topic of the questionnaire: *Dayakarsa* (*Daya* – drive, power, effort, energy, psychic power; *Karsa* (from the Kawi) – strong volition, wish; *Dayakarsa* was a new word introduced into Indonesian about 1970, so not everyone is familiar with it), *Kemauan Keras* (*Kemauan*-wish, desire, will; *Keras* –

strong, with effort; *Bekeras* – persistence), *Tekad* (I must do, determination despite consequences, strong will, resolve). The Balinese words *Jengah* (I must get, a challenge, a struggle) was also used during interviews later, as well as *Semangat duang* (high motivation).

In considering whether there should be additional questions to cover other aspects of volition, Suryani added two questions, bringing the total to 95 questions.

I took this translation to Sutjahya (instructor in English at Udayana University; he previously had lived in Australia 5 years, and recently he has been chosen to chair a new Department of Semantics and Translation at Udayana University). He read over the Indonesian and verbally back-translated it into English, and then he checked the English. Where he had some question, we talked about the meaning of the question. He made some suggestions in changing the translation in about 25% of the questions; most of the changes were minor. I took these suggestions back to Suryani, and we went over them together. She accepted all but a couple of the suggestions, giving good reasons not to do so.

II. Pilot Phase

In the pilot phase of the research, it was necessary to gather preliminary quantitative and qualitative information to help refine the psychometric properties of the BVCQ. Suryani gave the questionnaire to 5 of her clinical patients and interviewed them afterwards in depth about the questions, asking them which questions did not make sense, which were too complicated, etc. Based on these answers, we tried to streamline several questions. The interview also asked them a number of questions about volitional strategies, social competence, developmental history, goal evaluation, and questions on psi.

After we revised the questionnaire, she gave the questionnaire to about 28 of her medical students; for each question, she asked them to mark if it was not clear, if it was too complicated, if it was redundant, and if it was too personal to answer. We asked them how long it took them to finish the questionnaire, and if the length of the questionnaire was a problem. (This was BVCQ1A)

After revising the questionnaire slightly (this was BVCQ1B), we gave the questionnaire to 108 more people, again asking them the same questions above, but at the end of the questionnaire, we asked them to write down any question that fit into any of these categories of unclarity.

Based on this data, as well as an analysis of the response patterns, we reduced the number of questions from 95 to 82 (leaving in several questions (7, 29, 70, 79 in new numbers, i.e. on the BVCQ2 – Appendix I; the Indonesian version is given in Appendix II) to get cross-cultural data on, but they were not to be used for factor analysis, assuming their scores remained skewed). Several questions were seen as redundant, several as too difficult or unclear to respondents, and, in general, some negative questions were seen as too complicated in wording. We again carefully went over the questions and made minor changes for the sake of clarity in 7 questions. We discovered a mistranslation on question 56 (62); this question was kept in but eliminated for the factor analysis. We changed 2 questions (26 and 50) from negative to positive, since they were still too complicated. To compensate, we changed two questions (11 and 51) from positive to

negative. We gave this version to 80 people and asked them to mark questions that were unclear, too complicated, or too personal. At this point, I left Bali, with a plan for Suryani to administer more questionnaires.

III. A Complication

Suryani has a research project working with school kids in Abien Semal, a rural village not far from Denpasar; it is still a traditional village, but since it is close enough to Denpasar, it has received some Western influence. It is an example of a traditional village in transition; she also had contacts in the adult population. Additionally, she works with a group of elderly Balinese who live throughout Bali (outside of Denpasar). She decided to give the questionnaires to both groups.

For the elderly group, she sent the questionnaires to a central organization. They were given to the elderly at a meeting, who took them home and filled them out and brought them back to the next meeting, where they were collected and sent back to Suryani. Because some people complained that the questionnaires (BVCQ, and BPIF, were always given together) were difficult, the person in charge only gave them to people who had sufficient reading skill.

The rest of this group was from Abien Semal. Every psychiatric student intern in this village, not far from Denpasar, was told to get 15 completed forms. These students are supervised by Dr. Nandra, the Head Resident and intern supervisor. Interns went into homes in the village. Sometimes they left the questionnaires and sometimes they stayed while they were filled out (sometimes they had to explain a question or two). The students were asked to choose persons with at least a high school education. Suryani added the following introduction to the questionnaire:

“I hope you will be willing to provide answers to the following questions concerning willpower. The goal of the research is to obtain information concerning willpower so that those who own such powers can maintain their high powers. This kind of power is much needed in the effort to achieve success. Thank you for your cooperation.”

So, there were three differences between this sample and the previous sample:

1. This sample was from outside Denpasar, either from the village of Abien Semal, or elderly throughout Bali.
2. The questionnaires were not given in a group setting.
3. In order to explain the scale better (questionnaires and multiple choice questions on tests became common in the school around 1980, so anyone who had studied since that time was fairly used to them; those who studied before this time are less used to them), Suryani thought she should provide more amplification of the scale. Whereas the scale up to this time was a simple 5 point Likert scale, with 1 = not true and 5 = very true, and no explanation of 2-4, the description of the scale was changed to:
 - 1 = very much not true
 - 2 = not true
 - 3 = doubtful
 - 4 = true
 - 5 = very true

Also, a question #83 was added: After you have answered the questionnaire above, what is your feeling about the volition you have; this question was not used in any analysis:

- 1 = very low
- 2 = low
- 3 = enough
- 4 = strong
- 5 = very strong

A significant number, 385 questionnaires, was collected using these two samples.

A factor analysis was done on all of the data by Claire Brady, Alison Roe, and Chiara Amati in the Koestler Lab at Edinburgh University and it was discovered that there was a response bias in the answers. After a great deal of analysis, it was discovered that the bias was in the data from Abien Semal and from the elderly, those 385 participants: they tended to a significant degree to avoid answering #3 and but to mark answers #s 2 or 4 (thus usually making #s 1 & 5 lower). In other words, they were biased against answering # 3 (defined in this questionnaire as “doubtful”) and to mark #s 2 and 4. This showed up on a graphic representation as a kind of valley in the responses for # 3. This is a very unusual response pattern, and the reason for this specific response bias pattern is not apparent, although it seems reasonable to assume that the change in defining the Likert scale is generally responsible for the response bias. In the only other questionnaire data that we could find that defined the responses #1-5 in this same way (a questionnaire given to middle school and high school students in Abien Semal), this response bias did not appear. To try to find an explanation for the bias, I interviewed a number of people in Bali; a number of theories were offered, but at this time none is sufficient to fully account for this specific response bias pattern.

We gave the questionnaires to another sample from Ambien Semal, changing the description of the scale back to the original. These questionnaires were handled by Dr. Nandra and the student interns. They took the questionnaires to homes, again, as well as to places like the police station. We were looking to see if we got the same biased response pattern as before. Much to our surprise, we found another response bias present in many of the questionnaires: many of them answered only #s 1 & 5 (not giving any answers to #s 2-4 on the scale). Neither Dr. Nandra or the interns know about the previous response bias, so this result cannot be explained as an attempt on the part of the respondents, or indirectly of the interns, to overcompensate to the lack of responses on these extreme numbers on the scale from the previous set of questionnaires.

We will continue to investigate this phenomenon, because it may have interesting implications for cross-cultural psychology, but for the purposes of achieving what we set out in this study, we simply eliminated the 385 questionnaires from the original study in Ambien Semal (and from the elderly), as well as this new data from Ambien Semal, from our data pool.

IV. Finish Gathering the Data and Preparation of the Data for Analysis

Since this negated the work we had done for a year on the questionnaire, reducing our pool size to a group too small for an optimal use of factor analysis, we decided to get some more responses. We gave the questionnaires to groups in Denpasar, many of whom were students. These were given in the same way as the earlier questionnaires. We then pooled the questionnaires for participants BVCQ1, BVCQ2 (minus the two groups explained above), and got the data ready for a factor analysis. I did two things: first, I performed a 10% error check on questions chosen at random; since the percentage of errors was less than 0.001%, it was felt that the data adequately represented the responses on the questionnaires. Secondly, I checked for missing values. If more than two questions had not been answered, the questionnaires had been discarded; thus, there was never more than two data points missing, and this was rare. Further, the missing answers did not group around any question or set of questions. Following the procedure developed by the Koestler Lab in previous factor analyses of their VCQs, I computed the average score for the person on the questions they had answered and assigned this to the unanswered questions. At this time, the data was ready for the initial stages of factor analysis.

RESULTS

Two kinds of factor analyses were performed on the data; one was done in Bali, and one in the Koestler Lab.

1. Balinese Analysis

After a principal axes method of factor extraction, there are two methods of factor rotation, an orthogonal rotation and an oblique rotation. There is a good deal of controversy about which method is more appropriate. In Bali, the orthogonal rotation was selected, using the Verimax technique, after the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was performed (satisfactory at .904). A 5-factor and a 9-factor analysis were chosen (using a factor loading of above ± 0.3 , leaving 58 items). Both solutions gave analyses of volition that had some intuitive plausibility.

The factors for the 5-factor solution were:

Factor One: Positive self-image/self-confidence

Factor Two: Persistence/initiative

Factor Three: Helping/influencing others

Factor Four: Handling outside influences

Factor Five: Relaxation.

However, there are two reasons for not taking these results at face value. First, all of the questions in Factor Two were expressed negatively in relation to high volition (ex.

I rarely take the initiative, I have difficulty overcoming adversity); it is possible that the loading of this factor is due more to the structure of the question than its content.

Second, factor five contains only two questions.

The factors for the 9-factor solution were:

Factor One: Self-control/ self-image/charisma

Factor Two: Self-discipline

Factor Three: Helping others

Factor Four: Persistence/initiative

Factor Five: Handling outside influences

Factor Six: Self-control

Factor Seven: Relaxation

Factor Eight: Influencing Others

Factor Nine: Persistence

While this solution breaks out its factors more strongly, and it is more specific in naming different aspects of volition, fuzziness is also introduced into the factors. The question, “I find it hard to relax mentally,” is found in both Factor Six and Seven, as well as “I do not cope well with stress.” Factor Seven has only three items, and Factors Eight and Nine have only two and one items respectively.

Thus, the orthogonal factor analysis done in Bali does not yield a clear-cut solution.

2. Edinburgh Analysis

Three analyses were done by Chiara Amati and Claire Brady of the Koestler Lab (the first two by both, and the third by Chiara Amati alone):

1. A factor analysis of all questions on the BVCQ, using oblique rotation solutions.
2. A factor analysis of only questions 1-66 of the BVCQ.
3. A comparison between the BVCQ and the VCQ’98, using only the questions on each of these questionnaires that were included on *both* questionnaires.

I will discuss each of these analyses in turn.

Analysis 1: A Factor Analysis of All Questions on the BVCQ3, Using Oblique Rotation Solutions

I indicated earlier that there was disagreement about which kind of rotation, orthogonal or oblique, was appropriate in factor analysis. The Koestler Lab has used oblique rotation in its analyses, if the factor-correlation matrices suggested its appropriate use. Thus, the Lab followed the same procedure in this analysis that it had used in its other studies of the VCQ. They eliminated four questions on the basis that their skew and kurtosis values were extreme. All four of these questions point to interesting cultural reasons for receiving non-normal responses. Questions 7 (“I act with a firm sense of duty toward my family”) and 35 (“I develop and maintain strong beliefs”) point to the fundamental importance in Balinese culture of the family and of religion. Questions 70 (“Do you believe that events in your life are directed by a superior power/being”) and 79 (“I worry a lot about offending or hurting someone close to me”) were questions I introduced into the BVCQ on the basis of important cultural characteristics (again, the

importance of religion, and a prime motivating factor of what the Balinese call *lek*, or shame, in the public realm). Thus, the fact that the responses were not distributed normally is not surprising.

Thirteen other questions were eliminated from the analysis because they did not correlate well to other questions. It is interesting that 7 of these 13 were items introduced by me based on my research into the self-efficacy literature, as well as specific items related to Balinese culture. Thus, after two of the 16 questions I had introduced were eliminated in the first step of the analysis, due to extreme skew and kurtosis values, 50% of the remaining these questions were eliminated at this stage. That left only 7 of 16 questions not originally in the pool of questions from which the VCQ had been constructed in Edinburgh. This points to the robustness of this original pool developed in Edinburgh. It also suggests that these are the questions that should be focused on. However, our task in this project was to see if we could develop a Balinese BVCQ as a first step, irrespective of the construction of the Edinburgh VCQ. Thus, this analysis seeks to determine if an independent BVCQ was constructed.

The scree plot suggested the possibility of both 3-factor and 5-factor solutions. Let us examine the 5-factor solution first, since a 5-factor solution was performed in Bali using an orthogonal rotation. Except for Factor Two (Bali Factor Three), the factor related to Helping or Influencing Others, there is little overlap in the two sets of factors (nor, one may add, with the factors of the Edinburgh VCQ'98). Factor Five (Bali Factor Four) deals with Handling Outside Influences, but the questions loading onto the factors in these two analyses are very different, even if concerned with the same theme. Finally, Factor Three has only two items, which don't seem conceptually related to each other. Thus, the 5-factor solution does not seem to be a satisfactory solution.

The 3-factor solution produced a large number of items for two of the factors (Factor One had 31 questions, and Factor Three had 16 questions). Only Factor Two, which had 11 questions reproduced a factor similar to the ones on the 5-factor solution (Factor Two (Helping Others); thus, this factor seems to be a rather robust one across analyses, but the other two factors in this solution not only did not match factors in other solutions, but they did not have strong conceptual coherence. Thus, the 3-factor solution of all of the questions in the BVCQ does not seem adequate.

An examination of an oblique rotation of all of the items in the BVCQ3 suggests that no solution is satisfactory. Taken as a whole (including all of the questions), the questionnaire does not seem to have a stable factor structure.

A factor Analysis of Only Questions 1-66 of the BVCQ

Since so many of the questions from 67-82 (the ones added by me over and above the original pool of questions from Edinburgh) were eliminated in the analysis of the BVCQ3, it was thought that an analysis of only questions 1-66 might offer a more stable solution in factor analysis.

A factor analysis was performed on the 66 questions, minus question 56, which was eliminated because of changes in translation. On the basis of low reliability, nine items were eliminated, leaving a total of 58 items. 3-, 4-, and 5-factor correlation matrices were performed; on the basis of these, oblique factor analyses were performed on the data. The 3- and 5-factor solutions seemed the more consistent. More items

loaded onto the 3-factor solution. However, the 5-factor solution broke down the large Factor One in the 3-factor solution, and Factor Five picked up items that had not loaded in the 3-factor solution.

A comparison was done between the factor structures of questions 1-66 according to the 3-factor solution performed in Edinburgh, the 5-factor solution performed in Edinburgh (both using oblique rotation), and the 5-factor solution performed in Bali (using an orthogonal rotation on all 82 questions). What one sees is that seven items from Factor 1 in the Edinburgh 3-factor solution loads onto a fourth factor (Factor Four) in the Edinburgh 5-factor solution, with Factor Two and Factor Three remaining stable. When one compares these four factors with the 5-factor solution done in Bali, there is great consistency. Thus, one sees that a certain degree of stability has been achieved on these four factors using different factor rotations and different factor solutions on different size item samples. The factors are:

Persistence/Initiative,
 Helping/Influencing Others,
 Positive Self-image/Self-confidence, and
 Handling Outside Influences.

However, the same degree of consistency is not found these solutions on the BVCQ and the VCQ'98 (Edinburgh VCQ). A good overlap in items is found between BVCQ Factor Two (Helping/Influencing Others) and VCQ'98 Factor Two (Helping/Influencing Others). In other words, in both Bali and Edinburgh, respondents tend to answer questions dealing with the idea of helping or influencing other people in a correlated way. Additionally, there is a potential (but weak) link between BVCQ Factor One (Persistence/Initiative) and VCQ'98 Factor Five (Self-discipline). There doesn't seem to be any connection to BVCQ Factors Three and Four to any of the factors or the VCQ'98.

A Comparison Between the BVCQ3 and the VCQ'98,
 Using Only the Questions on Each of These Questionnaires
 That Were Included on Both Questionnaires

Because there was not a great deal of consistency between the Factors found on the BVCQ and the VCQ using the first 66 questions, a factor analysis was done on the BVCQ and on the VCQ using only questions that were used on both instruments (see Appendix 3). Eight questions from the VCQ were eliminated because they were not used in the BVCQ, and 16 questions from the BVCQ were eliminated from the analysis because they were not used in the VCQ. Additionally, the translation of question 56 was changed enough from BVCQ1 to BVCQ2 that it was eliminated from this and all previous analyses. This left 65 items in the factor analyses.

A further 14 items were eliminated because of skewness and kurtosis, as well as failing to correlate in either the BVCQ or the VCQ (Appendix 3 has a detailed discussion of the analysis.) Scree plots suggested 5-factor solutions for both the BVCQ and the VCQ. Oblique solutions were chosen for the rotation method on both instruments. Appendix 3 lists the 5 factors for the VCQ and the 5 factors for the BVCQ, as well as a 3-factor loading for comparison purposes.

The focus of these analyses is to compare the BVCQ and the VCQ as instruments. Appendix 3 shows that only one of the factors (Factor Two Helping/Influencing Others) compares well on the two instruments. Besides Factor Two, there is little overlap in the factors. Thus, the responses that we got on the BVCQ in Bali do not match the responses of the VCQ in Edinburgh. In other words, using the same questions found on the VCQ, we did not replicate the results of the VCQ'98. As it now stands, the VCQ does not appear to be an instrument that can be used in a non-EuroAmerican culture such as Bali. There may be at least two reasons for this. The first is that the VCQ'98 cannot assess the volitional competence cross-culturally, either because of the limitations of the instrument, or because the expression of volition is too culturally sensitive. The other reason may be that we do not know enough yet about administering the instrument cross-culturally.

On the other hand, the BVCQ shows a good amount of consistency in four factors over three different analyses: the Edinburgh 5-factor oblique rotation using only the questions found on the VCQ'98; the Edinburgh 5-factor oblique rotation using questions 1-66; and the Balinese 5-factor orthogonal rotation, using all 82 questions (See below). Considering that these same four factors emerge when analyzing different portions of the data using different methods suggests that this is a rather robust finding. Thus, although we have not yet been successful in developing a reliable BVCQ, nevertheless this kind of consistency is a good first step in analyzing factors that are a part of the Balinese conception of volition, and the first step in developing a dependable BVCQ. The fact that the Balinese respond to questions from the VCQ in a different way suggests that we are dealing with cultural differences. Therefore, let us examine a complimentary set of data—responses in interviews about volition—as it relates to the four factors.

Consistent Factors Across Analyses

	Edin. 5- factor (VCQ)	Edin. 5- factor (1-66)	Bali 5- factor (all 82)	<u>Persistence/Initiative</u>
BVCQ08	1	1	2	8. I find it difficult to stick to my decisions
BVCQ22	1	1	2	22. I rarely take the initiative.
BVCQ23	1	1	2	23. I often have a hard time having my views taken seriously by others.
BVCQ30	1	1	2	30. My opinions often change
BVCQ34	1	1	2	34. I have little persistence
BVCQ44	1	1	2	44. I find it hard to make decisions, even if they are minor ones.
BVCQ55	1	1	2	55. I have little influence on others' values and beliefs (new trans. Used "kurang."
BVCQ61	1	1	2	61. I rarely win games with competitive partners.
BVCQ27	1	1	1	27. I have little self-discipline
BVCQ52	1	1	2	52. I readily become absorbed in my own thoughts

**Edin. 5- Edin. 5- Bali 5-
factor factor factor
(VCQ) (1-66) (all 82)**

Helping/Influencing Others

BVCQ37	2	1	3	37.I am not very good at helping others solve their problems.
BVCQ15	2	2	n.l.	15. Others rarely ask my advice when they are in a difficult situation.
BVCQ20	2	2	3	20. I am good at influencing others' course of action.
BVCQ26	2	2	3	26.I am good at helping others avoid stress. (changed from neg to pos)
BVCQ28	2	2	3	28. I can influence my close friends when appropriate.
BVCQ31	2	2	3	31. I am good at making other people happy.
BVCQ45	2	2	3	45.I am good at helping others recognize stress.
BVCQ63	2	2	n.l.	63.I am good at helping others develop mentally.
BVCQ57	2	2	3	57.I can dominate when appropriate.
BVCQ43	2	2	3	43.I am good at helping others learn.

**Edin. 5- Edin. 5- Bali 5-
factor factor factor
(VCQ) (1-66) (all 82)**

Positive Self-image/Self-confidence

BVCQ02	3	3	1	2. I have strong determination
BVCQ14	3	3	1	14. I am generally full of energy and vitality.
BVCQ17	3	3	n.l.	17. I generally choose the right time to take action.
BVCQ21	3	3	1	21. I am in control of my habits.
BVCQ24	3	3	1	24.I am generally self-confident.
BVCQ25	3	3	1	25. I keep myself in good physical shape.
BVCQ29	3	3	1	29. I act with a firm sense of duty to society.
BVCQ32	3	3	1	32.I am generally free of unwanted habits
BVCQ36	3	3	1	36. I consider myself a lucky person.
BVCQ39	3	3	1	39.I find it easy to improve myself.
BVCQ40	3	3	1	40.I can focus all my attention on one thing.
BVCQ60	3	3	1	60. I have a good memory.
BVCQ64	3	3	1	64.I am able to change my mind when appropriate.
BVCQ58	3	4	1	58. I am good at controlling my emotions.

**Edin. 5- Edin. 5- Bali 5-
factor factor factor
(VCQ) (1-66) (all 82)**

Handling Outside Influence

BVCQ19	1	4	4	19. I do not cope well with stress.
BVCQ38	1	4	4	38.I often let things in my life get out of control.
VCQ42	1	5	4	42. I find it hard to relax mentally.
VCQ49	1	4	4	49. I do not deal effectively when fearful for my physical well-being.
VCQ59	1	4	4	59.I have difficulty eliminating bad (rather than "unwanted") habits.
VCQ62	1	4	4	62. I do not deal effectively with psychological fear.
VCQ65	1	4	4	65.I am impatient.

INTERVIEWS ON VOLITION

Professor Suryani interviewed nine people using a semi-structured format. Although she had a list of topics concerning aspects of volition, she allowed the subjects to respond as they wanted, and followed topics as they were suggested. She tried to elicit responses on each of the topics sometime during the interview. The first seven of these interviews were transcribed in full and they were translated into English. From these translations, I performed a content analysis. The first grouped the pertinent responses from all of the seven participants by. I then divided these responses into three groups, according to an *a priori* evaluation by Professor Suryani of the volitional level of these participants: high motivation, changeable volition (because of circumstances in their lives) and moderate volition. The categories contained four, two, and one participant respectively. In a number of the responses, there are important differences among the three categories, and they will shed light on how we should understand the four factors among the Balinese.

Before proceeding to the analysis, let me make a general statement about the interview data. In a classic article, Shweder and Bourne (1989) "Does the Concept of the Person Vary Cross-Culturally?" give an affirmative response to that question. More pertinent to our purposes, however, they argue that different cultures think in different ways. The point is not that different cultures think in the same way, that is, their cognitive processes are the same, but they simply think about different things (thus producing different worldviews). But *how* they think differs. Comparing descriptions given in American culture with those produced among the Oriyas in India, they offer data in the article showing that Americans think in a more abstract, context-free way, while statements made by Indians tend to be more concrete and related to a particular context. They also describe their worldview as more holistic. Richard Nisbett (see Goode, 2000) recently has also argued that cognitive processes vary among cultures.

It is important to point this out because, as I have argued elsewhere (1998, 1956), Balinese culture is also a holistic or relational one, and they tend to be concrete and context-based thinkers. Therefore, the process of interpreting the interview data is complicated by this cultural difference. What I am trying to do in the content analysis is to see patterns in the data and to abstract from it in ways that the Balinese might find discomfiting. I mention this simply as a context for the analysis, but since the issue in this study is not specifically differences in cognitive processing, I will not pursue this question further.

Let me deal with some general issues first. In the factor analysis of the BVCQ, two questions were eliminated because they exceeded the bounds of skewness and kurtosis. In other words, the responses to the questions were both extreme in the positive direction, as well as so consistent among the responses, that there appeared to be no individual differences in responses. The two questions are: "I act with a firm sense of duty toward my family," and "I develop and maintain strong beliefs." What one sees throughout the data is that both family and religion are fundamental in Balinese culture. Both of these are powerful influences on their worldview, and in turn, it makes sense to think that they affect their notion of volition. In several instances, I will discuss how religion and family affect aspects of their volition.

During the interviews, Suryani used the Balinese word, *jengah*, which describes the feeling of being lowered and thus you need to develop a challenging or fighting spirit. In describing what stimulated their sense of volition, most of them talked about "hard conditions" or "pressing conditions." They often talked about difficulties in childhood; for instance, one man came from a family so poor that he remembers stealing food from his younger brother in order for him to have something to eat, and in turn, feeling so bad about it that he began to catch fish and sell them. A woman described rejecting the sexual discrimination she felt as a child because she was a girl in the highest class. A few other people described difficult but not life threatening economic circumstances, such as not having the money to continue their education, to be pivotal in the development of high volitional competence. These challenging experiences in life seemed to provide the setting and the motivation to work hard and better themselves.

When asked about the strategies of volitional competence that they employ, the high volitional people (HVC) talked about several strategies: using calculation, developing knowledge, being flexible in response, developing imagination, seeing what others do in the situation, discussing the problem with others, refraining from grumbling, working with others in groups to solve the problem, focusing attention, having perseverance, and facing the facts of the situation. All of these are strategies that one would expect to hear in any discussion of volition.

Although the second group, let's call them the extreme volitional group (EVC), (as at times in their lives may have had high volition, but at other times, more recently, they have experienced depression and low volition) had some of the same responses, undoubtedly remembering times when they were volitionally competent. But they also described less positive strategies, one saying that he imagined negative situations in order to stimulate himself, and the other saying that accomplishing something was often a matter of luck or accident.

The person in the third category, the moderately volitional competent (MVC), had a very different approach. The only strategy he mentioned was to apply as little energy as possible in any situation (he named it his "principle of economy"), but he seemed to be more concerned about expending energy than he was in accomplishing the goal. Thus, we began to see some differences in the groups as to how they conceptualize and, presumably, employ volition in their lives. It should be mentioned that the MVC is a successful person: he is a professor in a university. In other words, he has a good deal of intelligence and he has parlayed that intelligence to achieve an enviable position in Balinese society, but even within that position he may not be seen as a particularly motivated person.

I. The Four Factors

Let us examine in turn each of the four factors that commonly arose in analyses of the BVCQ (see above) and look at how the interview data can shed light on them. It needs to be kept in mind that each factor is comprised of a number of statements, most of which were not dealt with in the interviews. Thus, the interview data cannot reconceptualize the entire factor, but it can provide insight into aspects of each factor, letting us see how these aspects can be interpreted concretely thus increasing our understanding of the applicability of these factors.

Factor One: Persistence/Initiative

Two issues are addressed in the interviews. The first is whether or not the participants find it difficult to make decisions; the interview data finds a distinction between the MVC and the other two categories. In general, in the high HVC and EVC categories, the participants think that they make decisions fairly easily, or if not, the problems they have are in very limited situations. For instance, one woman says that it is not easy for her to make decisions because she is involved with her husband in a business, and she has to consult him. However, this is not a comment on her own decision-making ability, but rather on circumstances that limit her ability to make her own decisions. Only the MVC said that it was not always easy for him to make a decision, because there were a lot of emotional and environmental factors always involved in making a decision.

The second topic in this factor concerns competition. The question from the BVCQ is: "I rarely win games with competitive partners." The idea is that the more you like and engage in competition, the higher your volitional competence will be. In this question, the results from the three categories are not simple. As one would expect, the MVC says that he rarely competes, pointing out ". . . that each of us has different levels of ability; we have our own advantages and disadvantages." On the other hand, the EVC portray themselves as just the opposite, as highly competitive, with one saying, "The sense of competition is very intense in me." The entrepreneur talks about her area of business as having a lot of competition, so that she must always be able to present her product in the best possible way. One gets the feeling that the times when the EVC display high volition, they see themselves as competitors, and they even emphasized this competition as something that is lost in their depression.

Finally, the HVC, which is the group that one would expect as showing the highest competitive urge, seems, at least initially, not to categorize themselves as competitive. One says, for instance, "I have never had a competitor in my life. I just go on." Another says, "I never feel that I am competing with others. I never nurture this in my mind. The reason is that I always consider myself supplementing/supporting a bigger organization. "What he seems to be pointing out is that when he is engaged in group activity, one should not be competitive within the group, although he leaves open the possibility of one group competing with another. He even admits that, "Although later I will be considered a competitor, my instinct says that I am not a competitor to other people." A third person in the HVC, said that there was competition in the family, but he didn't like it.

It looks like the concept of competition is somewhat complicated in Bali, depending on the context. For instance, if one is in business, one has to be competitive. On the other hand, if one is engaged in a group social activity, it is rather unseemly to be competitive. Bali is a communal society; when an outsider enters the society, what he notices is a high degree of etiquette. People do not want to be seen as pursuing their individual projects at the expense of others, and especially they do not want to be seen as prideful about their successes.

In fact, there is a great deal of competition that occurs in Bali; it is quite openly pursued on the intercommunity level, with one village thinking its gamelan orchestra is

far better than another, and there are a good deal of formal competitions among groups. In general, therefore, one can think of the Balinese as competitive, but the competition must be carried on according to rigorous social expectations, and the individual cannot be seen as exerting himself to beat another, as opposed to doing the best she can. And it is especially bad to be seen as competing so that one can be proud of one's victory. My conclusion, therefore, is that competition is strong among highly volitionally competent people, but that one's expression of the acceptance of competition may be muted, fearing being called prideful, and in general one's motivation should more be that of doing one's best than beating someone else.

Factor Two: Helping/Influencing Others

Given the discussion above, it is hardly surprising that this factor is an important one in Balinese society. It is a communal culture, where relationships define self-understanding. The local organization, the *banjar*, is the most important organization in the daily lives of the people. Most tasks in the village are done communally, from repairing the temple to putting on a cremation. So the Balinese are very other-directed. The two ideas discussed in the interviews were social involvement, and social confidence. As you would expect in a communal society, both social involvement and social confidence are high, even in all of the groups. All find it normal to work in groups and don't feel burdened by social duties. However, ironically the HVC express an overwhelming preference to work on a more individual level. These highly competent people may find working in a group slower than they are used to. One of them points out that it is difficult for the Balinese to defend their own views, and as a culture, individuals tend to give in too easily to other people and to the group. It may be that the best ideas don't always prevail, and the HVC find this exasperating.

On the other hand, the HVC have a very strong sense of the duty of working with others and the importance of this. One of them mentioned having learned this from his parents, "Since childhood I have seen my parents, though they were still in need, help my relatives. . . As I have been exposed to this kind of action, I then do it." Another says, "In carrying out my duties I consider myself nothing. I was born here in this world to do something useful to my fellow beings, so whatever I'm doing is not particularly for myself, not for my family, but for the interest of the society." Furthermore, they once again are worried about being seen as prideful. One says, "I don't want to boast myself because I have been helping people without emphasizing that I have more. I feel happy when others are happy." The EVC don't seem to have such pure motivation, nor do they seem to have a handle on the appropriate way of helping others. While both of them say that they support social activities, one reports that his wife ". . . considers me as being extravagant in this case." Perhaps the help is more for his own good than for the good of others. The other person in this category worries that ". . . he has to give to people that he doesn't like" and says, "Perhaps, in this case, I am carried by the course." In other words, he doesn't seem to be engaging in the activity willfully or thoughtfully. The social involvement of the third person is mostly financial contributions, so she doesn't seem very committed. Thus, there seems to be a difference between the HVC and the EVC.

The former have a high sense of their social duties but seem to prefer to work singly, while the commitment of the EVC seems lukewarm and duties are performed pro forma.

Finally, the MVC stated that it depended on the needs as to whether or not he helped, saying "I will not offer it to everybody." He seems interested in delimiting his social engagement.

Factor Three: Positive Self-Image/Self-Confidence

The import of this factor seems to be that the person of high volition feels in charge of himself, feels himself to be good and capable person. This factor deals with those factors that define our capabilities to accomplish things. These persons can take care of themselves, as well as fulfill their social duties. One of the questions in this factor is, "I act with a firm sense of duty to society." The interviewers approached this subject in two ways, first asking about conscientiousness toward social duties, and secondly about their burdensomeness. The answers from the HVC may be a bit skewed because of the peculiar circumstances of several of these people. However, they clearly show that duties to the family trump duties toward society, and this should come as no surprise since the question on the BVCQ concerning whether they have a firm sense of duty toward the family had to be eliminated in the analysis because responses to this question were culturally biased toward most everyone affirming that they had such a duty to a high degree. One of the HVC spent many years outside of Bali, and has fairly recently adopted Balinese religious customs, just before his marriage. He has a great sense of duty, and he enjoys his participation, but at times he feels a scheduling conflict if these duties suddenly take him away from scheduled business appointments, which he feels an obligation to attend. A woman in this group is a widow, who has ten adopted children, and she feels her first responsibility is toward them. Yet another person is an entrepreneur, whose husband works in another part of Indonesia, placing her in a kind of single mother situation, or, as she says, ". . . having to play the role of both father and mother with her children." She makes sure the children participate fully in the *banjar*, but because of her situation, she does not participate as much as she would like. As opposed to the HVC, who feel a real duty to society, the EVC are more ambiguous. One of them stresses that he handles his duty by making donations. He seems to believe that he can fulfill his duties through money and making sure that his employees are involved in activities. Another EVC believes that family matters are much too important and is not particularly concerned about social ones. The third one tells her children to participate. Finally, the MVC approaches these duties simply as "It must be done," saying that it won't be considered too burdensome if you just think about it as one of your tasks.

When asked if they resent these social duties and whether or not they think of these as duties imposed by others are more onerous than duties imposed by themselves, none of the Balinese expresses any sense that these social duties are onerous. Surely, one of the reasons is that the Balinese, in general, depend too much on help from others. For instance, one cannot carry out a cremation without the help from the community, and if they have not contributed time and energy in helping others, they cannot expect reciprocal help. We might want to call it long-term self-interest. But working in a group always presents special difficulties. We asked them what they did if the group decided

on a course of action they didn't agree with. Their responses were fairly consistent throughout the groups, although a couple of the HVC said they may quit if the disagreement was strong enough or about basic principles. In general, the Balinese simply said that they would go along, that they would participate, but that they would not take the role of initiator. At the very least, they would keep quiet; sometimes they might even disregard these particular duties.

Related to the question, "I have strong determination," the HVC in various ways indicated a strong determination. One of the respondents indicated that his life had always been difficult and that things have not come easily to him; however, he said "Hard life conditions can't be seen as a handicap to move on for a better life." He expressed, with a tinge of pride, that what he had achieved in his life was through his own work and not inheritance. Another of the HVC said, "Whatever the sacrifice, however difficult it will be, whatever handicaps exist, I will go through." She finally summed it up, saying, "I want to win and be a winner." Yet another HVC indicated the importance of determination, but also stressed that determination is not enough; one also needs the appropriate strategies to achieve the goal. One of the two responses in the EVC indicated that he would never stop trying to achieve his goal, but there was some reticence in calling himself determined. He said that other people would call him that when he is successful. The other indicated that she perseveres because her in-laws belittle here. Thus, neither EVC seems to possess a strong internal drive. The MVC also tended to give an external as opposed to an internal motivational response. Saying that he could develop determination by thinking seriously about the task to be undertaken, but he thinks about the following question: "Will it be visible or not?" The implication is that motivation will come from other people looking at what he is doing and his wanting to be seen as determined as much as being motivated by an internal sense of determination.

The third question in this factor that was discussed in the interview can be termed attention control, the question being, "I can focus all my attention on one thing." As one would expect, the MVC thought that he had only a moderate ability to concentrate, and admitted that he was not always absorbed in his activities. What is surprising is that the HVC do not claim high attention control, although in one case this did not seem to imply the lack of absorption. This person said he never concentrated on just one thing because he always was working on several things at the same time, engaging in multi-tasking, but surely could be successful if this requires a high level of attention control. But the lack of all groups, even the HVC, to assign this characteristic to themselves might be as much cultural as personal. What has struck me in going to a Balinese religious ceremony is that there seems little focus in it. Simultaneously, three or four important events may be going on at the same time: the high priest may be chanting, individuals may be offering prayers at another location, the gamelan orchestra may be playing, and the *dalang* may be engaged in a shadow puppet theater. And while all of this is happening, many others are standing around talking, and a group of men may be in the central courtyard carrying on a cockfight event. Also, women spend a good deal of their time traditionally in creating offerings, and usually this is a communal activity, where they talk and make the offerings at the same time. In other words, outside of specific activities, for instance, when they are engaged in prayer, Balinese are not expected to be absorbed in the activity to the exclusion of other things. Absorption indicates an individual activity, cutting oneself off

from others, and in a culture that is so heavily social, this kind of focus is not as heavily valued.

Of course, this doesn't mean that they lack attention control, only that it may not be as highly valued, and thus not readily attributed to oneself. To be concerned with attention control places the focus of value on the individual and the internal, rather than on the social and the outer, which runs counter to general Balinese values. However, I have talked with meditators in Bali, and they value and pursue attention control, and in general, when praying, the Balinese value focusing their attention. Thus, because of cultural differences, how they talk about attention control seems to differ from Western discourse, where it is generally considered a positive attribute. This shows that one must be more specific when asking the Balinese questions about focusing attention, and it is necessary to elaborate the circumstances in which they think it is a value.

Factor Four: Handling Outside Influences

This factor seems to deal with the ability to maintain some control or stability against negative outside influences. Several of these topics were discussed in the interview. The first of these deals with stress: "I do not cope well with stress." When asked whether they had experienced stress, only one, an HVC, said that he had never experienced stress, since he never made a fuss over any problem. Most of the interviewees talked about what brought them stress, from a husband having a mistress, to a wife controlling the husband's business; and several suggested strategies to relieve stress, such as engaging in meditation, talking to others, or turning to God. So they seemed to have experienced stress and were actively engaged in trying to relieve it. The MVC, on the other hand, had an interestingly different approach; he said that he had to accept stress and adjust to it, that it was something simply to be undergone. While one might admire the acceptance of something so negative, it looks as if this person is willing to let external circumstances control him; he submits to the outside influence rather than fighting it.

Another question was, "I have difficulty eliminating bad habits." When asked about bad habits, all of the HVC and EVC readily admitted bad habits, and even named them. The MVC, on the other hand, said "I do not think I have them." The unusualness of this response, both compared to all of the other participants, as well as simply to an intuitive understanding of life, is striking. One can't help but believe that the person is in some sort of denial. Perhaps to reject the idea that there are bad habits means that there is nothing he has to improve upon, no self-control or volition that has to be used.

A third question in this factor is, "I do not deal effectively with psychological fear." With the exception of one HVC who said she had never been frightened or had never felt the lack of self-confidence, all of the Balinese said that they had experienced fear. One of the EVC went to far as to say, "I feel scared of almost anything." Besides that unusual response, the groups did not seem to show much of a difference. The two remaining HVC seemed most afraid of upsetting others, while the other two EVC focused on techniques they used to overcome fear (but these latter responses seem more related to their having been in therapy and learned them rather than to general characteristics of this group).

II. General Comments on Volition

Several other questions were asked during the interview that relates to outside influences, but not specifically to questions in the BVCQ. For instance, Bali is a culture grounded in religion, and part of their religion is ancestor worship. The interviews asked about the influence of God and ancestors on their lives. Virtually all of the participants pointed to the influence of both God and the ancestors in life, and yet they tended to talk about these influences in terms of getting support and not in terms of control. One went so far as to explicitly state that no external power controls him. So the influence from gods and ancestors is viewed as positive in Bali, and not a matter of control.

When asked whether or not their parents had much of an influence on them, one might naturally think in this family-oriented culture that the influence would be great. However, only the MVC stated that their influence was big. Otherwise, the interviewees stated that the influence was small. One said, "Not much from my parents. They just provide the major guidelines and the decisions are on me. They just open the path whether I'm going to the left or to the right, or forward or backward. I make the decisions." Another said, "I remember that my parents only gave me advice that I had to become a good person." In fact, in Bali children are not strictly controlled and very rarely directly disciplined, so they have a great deal of freedom. Their environment is safe, and they wander the neighborhoods among themselves, with little parental supervision. Often older children take care of younger children, many times carrying them around. In a shame-oriented society, children readily pick up on the fact that their actions reflect on their extended family, and they are well behaved.¹ With this background, it is interesting to note that the one person who thought parental influence was great is the person with only moderate volitional confidence.

Participants were also asked at what age they felt their volition arise and what caused this. All of them stated that it was some difficulty--some physical, economic, emotional, or social problem--that they were faced with. I already mentioned earlier the case of one person, an EVC, who stole food from his younger brother in order to eat. Other people faced economic problems. So they often faced harsh conditions, where only extraordinary effort would allow them to survive or to accomplish their goals. Perhaps the fact that the MVC grew up in the highest class, as a member of the former royal family of an important region in Bali, he faced no outstanding financial or physical difficulty which forced him to develop his volitional competence, only a family that exerted a good deal of influence on him. Thus, it appears as if he did not have the continual practice of exercising his volition, nor was he placed in a situation where extraordinary effort was required so that he could see the importance of, and develop, high volitional competence.

This interpretation is supported by responses to the question concerning what kinds of standards they use. The standards named vary greatly, from wanting to be seen as successful in business, to owning your own house, and to becoming a well-known

¹ Gregory Bateson and Margaret Mead (1942) postulated a form of child rearing that made the kids docile; this theory, however, has been adequately disputed by Jenson and Suryani (1992).

sports figure. The MVC had a unique response. When asked whether he assesses his behavior by a standard, he responded, "I rarely do that." When asked why, he responded, "Everything has been done. My target is not the maximum; when the minimum level has been achieved, I will consider it to have been fulfilled." When asked why he made the minimum level, he responded, "This is to avoid frustration." Perhaps this is a classic response from someone without high volition, that it is too much trouble, that failure brings frustration, and so you set your goals low in order not to experience frustration. This person seems to lack persistence, he is not particularly interested in helping others, he doesn't have an especially high self image, nor does he handle outside influences well- -he just wants to keep from being frustrated.

The interview data, therefore, confirms the general direction of these four factors and offer some specific insight into aspects of them. We were not able to develop a reliable BVCQ in this project, but we made substantial progress in understanding the idea of volition in Bali. Although there are cultural differences in its expression, given the communal nature of Balinese society, and given the importance of religion and ancestor worship, it is no surprise to find, on the other hand, that the Balinese views are not radically different from Western views. We all face problems in the world, and these are people who successfully develop the volitional competence to meet these challenges. The basic outline of developing volitional competence seems to be similar in East and West; the nuances differ.

PSI IN BALI

The reason for investigating volition in Bali was twofold. On the one hand, it is an important concept philosophically and psychologically, and it is worth investigating in its own right. However, there is a more practical implication to our understanding volitional competence better: if we know what it means to successfully "will" something, we might better be able to develop control volition, and give suggestions for strategies in being successfully, on psi tasks. Therefore, what we really want to do is to develop better, more consistent ways in what may be called psi competencies. The second part of the project, therefore, was a study of how people conceptualize psi, what they believe about the existence and uses of psi, and how it may be possible to develop psi abilities. Further, we wondered if we might begin to discern which subjects might be good subjects for an experimental study of psi.

Two methods were used to accrue this information. The first was the use of a questionnaire, which we developed based on some questions used in the Participant Information Form (PIF) in Edinburgh. A number of questions were added based on my knowledge of the culture, as well as some initial interviews about psi in Bali, plus others that dealt with the modalities through which psi information was received. This form was given to 533 participants, and so we have a large database.

The second method of eliciting information was through interviews with people who were judged by the community to have psychic abilities. Since the claim to possess psychic abilities can be viewed as excessively prideful in Bali, we felt that the imputation of these abilities by the community was a better indicator than self-assessment reports. Both Professor Suryani and I have done studies independently among healers in Bali;

finding people who are purported to have extraordinary abilities, especially healing abilities, is not difficult, and Professor Suryani used her contacts and personal knowledge to perform eight interviews. These interviews were transcribed and subsequently translated into English.

I performed a content analysis on this data, but since the interviews were more free-flowing than the volitional interviews, without a specific list of questions that had to be covered (only a list of recommended topics), I had to use a more inductive approach to arriving at the categories than I did with the volitional data. However, I found that there were a number of topics that were covered by at least five of the eight interviews, so I was able to put the responses in each of the categories together to search for patterns. Much of the discussion about psychic beliefs will be based on these interviews, but let me begin with some general information that derives from the Balinese Participant Information Forms (BPIF)(See Addendum 4 for an English version of the BPIF, and the per cent responses in each of the questions.)

I. Balinese BPIF Responses

A 5-point Likert scale was used with the middle point usually designated as uncertain. In these discussions, I will divide the data into the first two values on the Likert scale, as designating a positive response, and the last three values as implying a negative response. For instance, we asked them, "Is the existence of ESP, or sixth sense, or *betal-tingal* there? 61% of the respondents said they were certain it existed while an additional 17% marked the second (unnamed) value. Therefore, 78% responded favorably, while the rest of them (22%) marked one of the last three values, showing they were uncertain or thought that it was impossible. (Of this 22%, 17% were simply uncertain.) When asked about the "existence of inner power (PK)," 75% responded positively. Similarly, 74% believe ". . . that through black magic one can harm another person." Thus, three quarters of the respondents were quite consistent in affirming the existence of psychic powers. One can safely say that the belief in psychic ability is ubiquitous in Bali.

It is therefore interesting, and perhaps even startling, that they have a vastly opposite view of the ubiquity of ability. When asked, "Does everyone have the sixth sense ability," only 19% gave a positive response. This is a dramatic difference from the 78% who believe in the existence of ESP. We got similar responses on questions about their own abilities. When asked, "What best describes your own psi ability?" only 14% marked the two highest values, while a full 46% marked the fifth value, "I have no psi ability." In trying to elicit a belief in their own PK ability, we gave them the following scenario, "When playing a game of chance, do you feel that you can influence the roll of the dice, or the way the cards are distributed in order to have more success in the game?" Only 11% gave a positive response, with 55% marking the last value, "No."

In asking further questions about their own psychic experiences, we received similar responses. For instance, a slightly higher per cent, 25%, marked the two highest values to the question, "Have you ever had an experience which is best explained by *betal tingal*, ESP or sixth sense, with 56% checking the last value, "No." Although 74%,

as indicated earlier, said that they believed in black magic, only 18% said that they had ". . . ever seen what you believe is a *leyak*," a common form of black magic. A higher percent, 32%, said that they had witnessed an event of a person knowing through sixth sense what was taking place at a distant location. 26% said that they had witnessed an event of a person finding a lost object only through the sixth sense. A similar number, 26%, said that they had ". . . witnessed a person moving an object in front of your eyes through a paranormal ability."

From this data several things can be inferred. The first is that there is an extremely high believe in the existence of paranormal ability in Bali. There is virtually no question about its existence. About a quarter of the people affirm that they have personally witnessed a paranormal event, both ESP and PK. So, dramatically fewer people believe that they have ever witnessed a paranormal event. In other words, only a third of the people who believe in the existence of ESP think that they have personally witnessed it. We have to conclude, therefore, that a great deal of the belief in paranormal ability in Bali is based on their worldview and not their personal experience. Finally, very few people think that they have the ability themselves or that they have produced a paranormal event, although the responses vary according to how the question is asked. 26% say that they have ". . . had an experience which is best explained by *betal tingal*, ESP, or sixth sense," but only 14% attribute psi ability or supernatural or *betal tingal* to themselves. Part of the reason for the smaller number to the latter question may be due to the fact that claiming such an ability, as indicated earlier, can be seen as having excessive pride in oneself, or they might have interpreted the question as trying to find out not simply if they have experienced psi phenomena, but whether they had the ability to do so on a continuing basis.

No matter which interpretation we take, one thing becomes clear: The Balinese believe overwhelmingly that psi exists, but they also tend to believe that they don't personally possess it. I believe this is because there is the general tendency in Bali to think of psi ability as a special spiritual gift, and only the relatively few possess it. The analogy in the West may be the difference in belief at the founding of the Society for Psychical Research at the end of the 19th century as opposed to the era after Rhine's experiments. I think it is fair to say that in the earlier period, psi ability was looked on as the possession of a talented (or strange) few, the séance medium who could produce outstanding effects. The paradigm for Rhine's experiments, on the other hand, assumed that everyone had the ability to some level, and therefore the emphasis was on the ubiquity of possessing psi ability in the population. Therefore, the view of the Balinese is more like the view in Europe and America at the end of the 19th century rather than after Rhine's experimentation. It is not surprising, therefore, that when asked, "Do you think that you might be able to be successful in a controlled laboratory experiment?" only 15% responded in the affirmative, with a full 45% stating that they categorically would not be successful. This figure has interesting implications, given what we know about the sheep-goat effect, for psi experimentation in Bali.

There is a caveat to the data above that needs to be discussed quickly. It looks as if the Balinese put their thinking about their dreams in a different category. I need to be clear that the percentages that I give are defined differently, as the values on the Likert scale are defined differently. The five-point scale about dreams goes from "never," to the middle value being "once a week," to the final value of "almost every day."

Therefore, I am taking as a positive response the first three values, ranging from "once a week" to "almost every day."

The responses to the question on dreams are very different. For instance, 63% indicated that they had "received in a dream a prediction of an event that is supposed to happen;" in other words, they affirm that they have had a precognitive dream. 41% respond positively to having had a clairvoyant dream, "For example, in your dream you meet a grandmother, and then actively in the dream at the same time, the grandmother has an accident." When asked specifically how they understand dreams, 27% of the responses said that dreaming can be a "communication with the spirit of another person," and 48% thought that dreams could be "forecasting of what is going to happen." So, it seems that they not only believe that psi information can be imparted through dreams, but at a much higher level than when not dreaming. Plus, they report themselves having experienced psi in their dreams.

II. Interview of Psychics

The psychics interviewed ranged in age from 24 years to 75, and they came from a variety of settings with a variety of educational levels. Seven of the eight claimed that they performed healing; only one said that he simply gave ESP predictions. Bali is filled with healers (*dukun* in Indonesian and *balian* in *Balinese*), so it is not unusual to have such a high percent claiming to be healers.

In general, they felt special at an early age; often this showed up as a religious impulse, feeling as a child the desire to visit the temple daily, for instance. Only one person said that he first felt special later than childhood or adolescence, and that was at the age of 40. Nevertheless, most of them did not begin working until the age of 40, although two of them began in high school. To some degree, the reason for this is that most healers do not carry on their activities on a full-time basis; most have full-time jobs, as rice farmers or even as a government official. They first need to establish themselves economically.

As a group they don't seem to have special characteristics. Two of them seem to distance themselves from their families, which is somewhat unusual in Bali, but as a whole, the group seems to be well adjusted and typically Balinese. And, in Balinese fashion, they tend to stress that one needs to have a pure heart for carrying on the healing, and not act out of self-interest.

Special Event

As often happens in traditional, shamanistic cultures, the healers can refer to some special event that precipitated the ability, or through which one felt that there was a "calling." Illness was a part of the background of three of them, and it was a factor in giving rise to their ability and their becoming healers. For instance, one person said that he fell ill at the age of 24 and was paralyzed, and in turn was healed by a man through meditation, who was still her teacher. Another said, "I was taken ill for a long time, two months, and it was diagnosed as a kind of poisoned state. During this time I experienced a long dream (in a half conscious condition), and when I was conscious I was back to normal."

This brings up the second pattern. For five of them, including the one mentioned, dreams played an important part. Another said, "I was taken seriously ill and nobody was

able to cure my sickness. One night in my sleep I dreamed something; an old man came and brought me medication. 'You take this leaf and take the tip and swallow it.'" He said he swallowed the leaf and became confused and thought he was going to die, but then he realized he was not dead and from that point he "became extremely strong." In three other cases, individuals mentioned having visions; one was of a precognitive sort. One person spent 20 years wandering and doing odd jobs in Bali, and he said that he saw entities with long hair and thereafter there were changes in his ability. Another person said that he saw "a hairy black man," who just stared, and then it changed to look like a *barong* mask, and then he understood a voice. This same man then indicated, "Once I objected to following the path; I got sick. This means that I had the obligation to serve people." This is a classic connection between illness and the obligation to heal.

Thus, the special events that seemed to precipitate the "call" can be divided into two categories; an illness, and a vision, either of the waking or dreaming categories. Even if the process of accepting one's healing ability was long, and they didn't start practicing until later in life, nevertheless each of them could point to a pivotal and special event.

Development of Psychic Abilities

One of the topics we were interested in was the development of psychic abilities. We asked on the BPIF what causes a person to possess paranormal abilities; they could mark more than one box. They responded:

- 55% learning a specific method or technique
- 47% choice of God
- 40% trance/being set on by power/possessed
- 31% dissent
- 5% mental disorder

Thus it appears that the Balinese believe that one can develop psychic abilities through learning a specific method or technique. Secondly, religion is very important. Psychic ability can be a special ability given to you by God, or it might come through being possessed by a deity. The final large category was the possibility of it coming down through one's hereditary line, which is a tradition in Bali.

In focusing on a more specific question concerning methods of developing ESP ability, the Balinese responded in the following ways; again, they could check for more than one box:

- 57% meditation
- 47% praying
- 38% yoga
- 19% fasting

We see meditation and prayer (or the religious, in general) being the factors related to the development of psychic powers.

When we turn to the interview data, we see confirmation of these two sources on a general level, but it is a bit difficult to see useful patterns. Of the eight interviewed, five of them specifically mentioned engaging in meditation. Seven of them mentioned some sort of connection to the religion; obviously, there is overlap in the two categories. For instance, the first person mentions both; she said that she practiced a particular kind of meditation, as well as trying to make herself close to God. The second person mentioned activities in the temple, and he mentions receiving special "gifts" from the

gods, and this usually happens when meditating at the *Pura Dalem*, the so-called "Temple of the Dead." The third person said that right living was important, but his focus was on learning the *mudras*, a complex system of hand gestures normally performed by the high priest during a temple celebration, for instance, when he is making holy water. These *mudras* are an important part of his meditation and healing practice. The fourth person also mentioned meditation, as well as studying the Balinese religion. The fifth person indicated that he initially was guided by his local priest, and then he moved from priest to priest. He was given mantras by them, and finally he heard a voice in meditation from his great-grandfather, who guided him for several years. So, again, we have the theme of meditation and religion, but something new is added, being guided from a discarnate entity. We also see this in the seventh person, who said he was given instructions for 20 years by the entities that he "saw" in his wanderings around Bali. The sixth person is married to another healer, and she mentioned his prayers as well as her own special "wedding ceremony" in which she was married to God. Finally, the eighth person said that he gained his powers through making prayers at certain temples.

Therefore, meditation and engaging in prayer and other religion activities seem to be important in the development of one's abilities. Additionally, two people had more unique experiences, being guided by some kind of discarnate entity. It may be worth noting that the last interviewee, in addition to offering prayers, said that his powers were developed through a process that was given him in a dream, allowing himself to experience electrical charges. He is a person who has come to the conclusion that the world is vibratory, and particularly the body, and believes that the electrical charges in some way increase his own vibrational energy. One cannot help but wonder if the confidence in his ability has been mustered by overcoming the pain in subjecting himself to electrical charges, and perhaps even success in healing (if he is successful; we did not try to check this) was a result of his strong belief in his ability (an example of cognitive dissonance in the face of the electrical charges) as much as directly through the electricity itself.

Meditation

Since meditation was so important in their development, we focused on the kinds of meditation practiced, hoping to see some new or unusual approach. Unfortunately, we didn't find any. They described breathing meditation, and meditation focusing attention on the tip of the nose. The most culture specific form of meditation we found was an imagery exercise where a person was taught to light an incense stick with eyes closed; in this state the person would have to "see" the incense stick and light it. Then he had to try to make his mind blank for one minute. The only other form described was simply concentrating on God. Thus, it doesn't appear to be the kind of meditation that is important, nor is there a new form of meditation that arises out of Bali.

Source of Power

When asked what the source of their powers were, all of them except one said that the power came from God. In the interview, we find statements like, "It is not a human ability. God is the source; it is my *sasuunan* [*deity*] from the south who does the treatment;" and, "a human being will never heal his fellow beings Any *balian* cannot do this kind of work except God." The only exception to this view came from a healer who said, "I don't know where the power comes from; I just know it. Frankly speaking, I don't know what makes me master it."

Sensory Modalities

We were also interested in the sensory modalities used in psychic experiences. The three that we focused on were visual, oral, and kinesthetic. In the BPIF of the people reporting ESP experiences, 46% of them said that they were kinesthetic (a physical sensation), while 21% said they were visual, 20% said auditory, and 13% olfactory. In the interviews, we got good descriptions of the visual, the oral/auditory, and the kinesthetic experiences.

a. visual modality

Of the seven people who reported visual imagery, three of them reported seeing lights, but they don't seem to make too much of this experience. Several of them saw images of sorts. One said an image appeared most of the time in treatment and gave instruction, but not auditorally. Others saw figures or images and they made drawings from them. During treatment, one person reported seeing the spirit of the person hovering 10 to 20 centimeters above them. Finally, one saw images in a kind of glass of water, but he can't see images without seeing it reflected in the water.

b. auditory modality

Four of the participants reported having auditory experiences where messages are heard giving them information or instruction. To make the distinction from regular hearing, one person said he hears it in his inner heart, the *kleteg*, in Balinese.

c. kinesthetic modality

The information on the BPIF indicates that kinesthetic reactions are very important. These vary tremendously from intuitions, such as "a feeling that the guardians of the compound are solid," to specific bodily feelings. One reports in meditation that the body becomes very hot and then feels enlarged, so that she can go out of the body and find a person. Another person feels that she turns into a vibration and that knowledge comes through this vibration. In talking about a healing experience, another person says, "In touching them . . . I feel irritated inside. For the energy there is this kind of "air" that must be taken out. Particularly at the backbone, the heat is extreme. When the heat is taken out I feel very light." Finally, one person talks about feeling itchy as knowing that "the spirit is sitting on me so that I can be of service."

At this time, she feels the Holy Spirit giving instructions, and she feels hot. The kinesthetic qualities seem to be individual; there does not seem to be a pattern among the bodily sensations. Associating, for instance, itchiness with the spirit being present to help heal must have been something the person found out through experience. In my own study of Balinese healers, I found their practices to be quite unique and individual for a great many of them, especially for the ones that do not follow the prescriptions of the *lontars*, the traditional palm leaf scriptures.

Diagnosing

For the healers, we asked how they were diagnosed, and the methods of diagnoses are as diverse as the treatments. Let me describe the diagnoses in turn:

1. This person simply had psychic precognitions; he is no healer.
2. This person uses a two-step process to diagnose. The first step is meditation; he says, "I meditate on the tip of my nose and know that the patient is suffering from a particular disease." This person is a traditional *balian usada*, the kind that consults

the traditional palm manuscripts. At this point, knowing the illness, he will consult the *lontars*, which will tell him the illness and what to do.

3. This person also has a two-step process. In the first one, he sits the patient on the ground in front of him as he sits in a chair; he performs his *mudras* over and around the patient and then checks certain points on the body by touching or squeezing them. It also seems to me (I have seen him work) that he is intuitively diagnosing, also. At this point, he takes a small stick and pokes various places on the toes and between the toes; if there is pain at a particular location, he has located the source of the disease in a particular organ, which is coordinated with locations on the toes.
4. This healer goes into trance, and he feels a ringing in his ears, and then a combination of bee-like sounds. At this time he will receive instructions to "eat the fire," a special treatment, which I will talk about below.
5. This person did not talk about his diagnosis.
6. This is the woman who says that she closes her eyes and feels that she is being assisted and guided, knowing that the healing is ready because her body feels itchy.
7. At one point, he says that he "contacts a spirit and the spirit tells me to do this and that." His other technique is that he has a glass of water and then he recites a particular mantra, which means that he is asking for help. He believes that the glass of water is a kind of disk receiver or antennae, and then he sees an image in the water.
8. This is the person who has thought that the universe has vibratory qualities, and so his method of diagnosis is to "check the frequencies with his inner feeling/conscience." In doing so, he can feel whether there is anger or peace and try to figure out if the source of these emotions are internal or external.

Treatment

Many of the healers recognize that there are "different kinds of sickness due to various reasons." Some of these are due to the ancestors or due to karma or to black magic, and some are what we would refer to as biological. Thus, some illnesses are spiritual and some are physical. If the illnesses are physical, they may offer some straightforward herbal remedies, or send them to a Western doctor. Herbal medicines are also still helpful for spiritual illnesses, but they may also use *mudras*, or have them belch, or simply touch the patient.

The final person interviewed is worthy of more discussion. I mentioned earlier that he was told to use an electrical charge in the development of his powers. It is not clear what the source of the electricity is, and he said he didn't know the wattage, but it makes him feel vibrations in the body. He says that he feels the suffering of the patients, and he focuses on that, using electricity until he is unconscious, and this process heals the patients. One other method of healing is worth mentioning. Interviewee #4 has had medical training, but he often finds his treatments at odds with what he learned at medical school. Early in his life, he received in a dream the words, "eat the fire." He begins his sessions by lighting a candle or a series of candles; he has received these instructions in a trance state. Then he begins to eat the burning candles until he has finished and then he becomes unconscious; he says that "During the sessions in trance I always eat fire."

Student Training

Trying to get at specific methods for the development of psi, we asked them what kind of training they did with their students. Again, the specific responses were fairly varied, although there was some commonality in having the students pray and make

offerings. They seem to try to engage in activities that got the students to develop their own techniques and approaches. One said, "My work with them is to develop their sixth sense." The techniques of development varied. One touched their eyes and said, "My ability is transferred. Then they can see a female or male figure come." The individual who focused on *mudras*, tries to teach *mudras* to the students, as well as to be faithful to the rules of religion and life. But in general, they offer prayers with the students, and encourage them to continue their prayers.

Black Magic

Knowing that most Balinese firmly believe in black magic (74% affirming it on our BPIF), we asked them about confronting black magic. In general they claim not to be worried about black magic. They tend to believe on divine powers for protection. One knows when an attack is being launched against her because she will see a butterfly coming. "It will drop in here, and then fly again. . . . The attacks were always in the form of animals which I see coming here." The most unusual response was from the last person interviewed who didn't seem to be worried about the effects of black magic, although he indicated that people had practiced black magic on him a lot. He says, "I accept the sickness. I have a belief which is so strong. When someone sends me a sickness, this is equal to a blessing. I am making savings of blessings." Evidently, believing in the balance of powers, is acceptance of the black magic will appropriately result in a blessing for him, so he does not fear black magic.

CONCLUSION

No general pattern, no "magic bullet" was discovered in the investigation of psychic practice in Bali. The practices and methodologies need to be placed into a wider context of practice in the West, as well as practice in other non-Western cultures in order to understand it better.

Several things are clear, however. Above all, it appears that religious belief is basic. This should come as no surprise, as the Balinese cultural identity is tied to what they call Bali Hinduism. Being a derivative of traditional Hinduism, there are elements of meditative practice. In these traditions, there is the warning against "siddhis," powers that can arise at a certain period of meditative practice. If one is looking for enlightenment, one is advised to ignore these powers. On the other hand, if one is seeking healing powers, it is natural to think that meditation is a way to achieve this.

The second "pattern" is the non-pattern. One is struck by the great variety of techniques and practices in Bali. Although there is a standing "system," propounded in the wide variety of *lontars*, which are used by the *balian usadas*, there are far more *baliens* in Bali that depend upon special powers, derived either from meditation or from power objects, than there are *balian usadas*. The hallmark of this class is their individuality.

Even a casual observer in Balinese culture notices the tremendous creativity, with almost every Balinese engaging in some form of artistic practice, even if it is simply making offerings. But one is also struck by the uniformity of the products. It is not that the Balinese do not create new products; since they are in a communal culture, these products are not felt to be quite so individually owned as in the West, and so there is

much copying. This is true in dancing, in painting, in wood carving, and most forms of art.

It is interesting, therefore, that one can almost view healing as the odd instance of the art form in which there appears to be little mimicry. The Balinese seem to pride themselves on the uniqueness of their approach, of the diagnosis and treatment, and even the powers that are efficacious in the process. Therefore, it is not any particular method that seems to be important for the production of these abilities, but rather it is two kinds of beliefs.

It is, firstly, their general beliefs, a worldview in which powers exist all around them, in which degenerative and regenerative forces are constantly at work. It is a worldview in which black magic is accepted and can be practiced on them by a host of individuals. It is a world in which the powers of good and evil are almost daily displayed in their dramatic performances between the *barong* and *rangda*. Supernatural powers abound.

Secondly, there is the belief that individuals have access to this and that certain individuals believe themselves to be empowered. These powers are communally negotiated, both formally and informally. 1) Formally, individuals need to be chosen to wear the costumes of the *barong* and *rangda*, a dangerous task being possessed by these powerful demons. In their communal assemblies, they nominate individuals powerful enough to do this, and so there are formal structures for recognizing transcendent powers.

2) But there are also indirect, less formal negotiation of power shown in whether or not people choose to go to a particular healer and to continue the treatment. And it almost seems that, for many individuals, the more individualistic, and perhaps the more dramatic methods of diagnosis and treatment are seen as efficacious by the population.

Therefore, what can be learned at this stage from the Balinese is not a particular meditation technique or any other strategy for development of psychic powers; rather, it is a powerful example of the cultural influences on the production of psi. A larger study of the relationship between culture and psi may give us a sharper understanding of this relationship, which in turn might suggest ways to bring the development and the production of psi functioning under more control.

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Appendix 1

WILLPOWER QUESTIONNAIRE**PLEASE COMPLETE THIS QUESTIONNAIRE**

There is a short paragraph of explanation from Suryani.

Please provide the following information:

Male Female Age: _____

Religion:

Usual occupation: _____

Educational background and/or vocational training:

- | | | |
|-----------------|-------------|----------------|
| 1. no schooling | 2. Jr. High | 3. Senior High |
| 4. Vocational | 5. Diploma | 4. University |

Marital status: 1. Not married 2. Married 3. divorced 4. Widow/widower
5. Separated

Ethnicity:

Cultural Influence: 1. A lot 2. Little

Place where you were raised:

1. In the city
2. In a village
3. In a tourist region

Please read through each item carefully, and answer according to how strongly each statement applies to you, using a 1-5 scale. If the statement is very true of you, please tick box 5; if it is not very true of you at all, please tick box 1; otherwise tick 2, 3, 4 as appropriate. Some of the questions may seem repetitive, but please consider each item independently of the other items.

		not true			very true	
		1	2	3	4	5
1.	I am not good at organizing my daily activities.	<input type="checkbox"/>				
2.	I have strong determination.	<input type="checkbox"/>				
3.	I enjoy life's pleasures.	<input type="checkbox"/>				
4.	I find it hard to help others deal effectively with stress.	<input type="checkbox"/>				
5.	I find it difficult to avoid harmful and bad habits (in myself). *	<input type="checkbox"/>				
6.	I can resist being influenced by other people.	<input type="checkbox"/>				
7.	I act with a firm sense of duty toward my family.	<input type="checkbox"/>				
8.	I find it difficult to stick to my decisions.	<input type="checkbox"/>				
9.	I find it hard to relax physically.	<input type="checkbox"/>				
10.	I often lead others toward a common goal.	<input type="checkbox"/>				
11.	I often yield to temptations in pursuit of a future goal. * change to negative	<input type="checkbox"/>				

	not true			very true	
	1	2	3	4	5
12. I rarely become absorbed in what I am doing.	<input type="checkbox"/>				
13. I know what I want in most situations.	<input type="checkbox"/>				
14. I am generally full of energy and vitality.	<input type="checkbox"/>				
15. Others rarely ask my advice when they are in a difficult situation.	<input type="checkbox"/>				
16. I am not good at avoiding temptation (which comes to me). *	<input type="checkbox"/>				
17. I generally choose the right time to take action.	<input type="checkbox"/>				
18. I find it hard to resist negative influences (to myself, or on me). *	<input type="checkbox"/>				
19. I do not cope well with stress.	<input type="checkbox"/>				
20. I am good at influencing others' course of action.	<input type="checkbox"/>				
21. I am in control of my habits.	<input type="checkbox"/>				
22. I rarely take the initiative.	<input type="checkbox"/>				
23. I often have a hard time having my views taken seriously by others.	<input type="checkbox"/>				
24. I am generally self-confident.	<input type="checkbox"/>				
25. I keep myself in good physical shape.	<input type="checkbox"/>				
26. I am good at helping others avoid stress. * (Changed from negative to positive)	<input type="checkbox"/>				
27. I have little self-discipline.	<input type="checkbox"/>				
28. I can influence my close friends when appropriate.	<input type="checkbox"/>				
29. I act with a firm sense of duty to society.	<input type="checkbox"/>				
30. My opinions often change.	<input type="checkbox"/>				
31. I am good at making other people happy.	<input type="checkbox"/>				
32. I am generally free of unwanted habits.	<input type="checkbox"/>				
33. I don't take on things others feel are beyond my capability.	<input type="checkbox"/>				

	not true			very true	
	1	2	3	4	5
34. I have little persistence.	<input type="checkbox"/>				
35. I develop and maintain strong beliefs.	<input type="checkbox"/>				
36. I consider myself a lucky person.	<input type="checkbox"/>				
37. I am not very good at helping others solve their problems.	<input type="checkbox"/>				
38. I often let things in my life get out of control.	<input type="checkbox"/>				
39. I find it easy to improve myself.	<input type="checkbox"/>				
40. I can focus all my attention on one thing.	<input type="checkbox"/>				
41. I have difficulty overcoming adversity.	<input type="checkbox"/>				
42. I find it hard to relax mentally.	<input type="checkbox"/>				
43. I am good at helping others learn.	<input type="checkbox"/>				
44. I find it hard to make decisions, even if they are minor ones.	<input type="checkbox"/>				
45. I am good at helping others recognize stress.	<input type="checkbox"/>				
46. I find taking responsibility difficult when in a group.	<input type="checkbox"/>				
47. I find it difficult to keep striving as long as necessary.	<input type="checkbox"/>				
48. I am in control of my own destiny.	<input type="checkbox"/>				
49. I do not deal effectively when fearful for my physical well being.	<input type="checkbox"/>				
50. I take responsibility for important decisions affecting others. * (From negative to positive)	<input type="checkbox"/>				
51. I am good at willing my mind to perform at a high level when needed. * (From negative to positive)	<input type="checkbox"/>				
52. I readily become absorbed in my own thoughts.	<input type="checkbox"/>				
53. I find it easy to make things in my immediate physical world happen as I would like.	<input type="checkbox"/>				
54. I have difficulty maintaining self-esteem. * (eliminated "high" to make clearer)	<input type="checkbox"/>				
55. I have little influence on others' values and beliefs.	<input type="checkbox"/>				

	not true			very true	
	1	2	3	4	5
56. I find it difficult to forgo gratification in pursuit of a future goal. * (changed translation from "godaan" (temptation) to "kepuasan"(gratification))	<input type="checkbox"/>				
57. I can be dominant when appropriate.	<input type="checkbox"/>				
58. I am good at controlling my emotions.	<input type="checkbox"/>				
59. I have difficulty eliminating bad habits. * (from "unwanted")	<input type="checkbox"/>				
60. I have a good memory.	<input type="checkbox"/>				
61. I rarely win games with competitive partners.	<input type="checkbox"/>				
62. I do not deal effectively with psychological fear.	<input type="checkbox"/>				
63. I am good at helping others develop mentally.	<input type="checkbox"/>				
64. I (am able to) change my mind when appropriate. *	<input type="checkbox"/>				
65. I am impatient.	<input type="checkbox"/>				
66. To accomplish a future goal, I can will myself to do things that I would rather not do. * (moved the last phrase to have it first)	<input type="checkbox"/>				

We are also interested in whether childhood experiences may be related to adult willpower. We are focusing on the types of interactions you had with figures of authority as a child.

For each of these items, give a rating depending upon how strongly the question applies to you

	not at all				a lot
	1	2	3	4	5
67. In your childhood how important were your wishes to your parents?	<input type="checkbox"/>				
68. Did your parents make you feel that you could become whatever you wanted to be?	<input type="checkbox"/>				
69. Were you sometimes able to get your own way despite objections from those in authority (e.g., parents and teachers)?	<input type="checkbox"/>				
70. Do you believe that events in your life are directed by a superior power/being?	<input type="checkbox"/>				

71. Do you feel you have much influence over the direction of your life (events, successes etc)?
72. How sure do you have to be about successfully achieving your goal before you act?
73. How comfortable are you in dealing with situations where the outcome is uncertain?
74. Do you believe that your intelligence is something about you that you can't change very much?
75. Do you believe that a person's moral character is something very basic about them and it can't be changed very much?
76. Do you think that you can control the events and things around you?
77. I feel that others are running my life for me
78. I feel that whether or not I am successful it is just a matter of luck and chance, rather than my own doing.
79. I worry a lot about offending or hurting someone close to me.
80. I worry about shaming myself.
81. I do anything I am convinced of without considering others' opinions, whether they agree with me or not.
82. I follow my conscience (in doing many things).*

A REQUEST FOR YOUR COMMENTARY

1. Is the questionnaire too long?

How long do you think the questionnaire should be?

Does the length of the questionnaire get in the way of your giving thoughtful answers?

2. Are the questions too difficult?

Which questions are not clear?

Which questions are too complicated?

Did you understand everything on the questionnaire?

3. Are any of the questions too personal for you to answer?

4. Is there too much redundancy to you in the answers? If so, which ones?
5. Are there other questions that will help us understand willpower that we have not asked?
6. How long did it take you to finish the questionnaire?

_____ minutes

Appendix II

I

PERTANYAAN DAYAKARSA (SEMANGAT JUANG, KEMAUAN KERAS, TEKAD)

JAWABLAH PERTANYAAN DI BAWAH INI

Yth Ibu/Bapak/Sdr.,

Saya mengharapkan sudi kiranya Ibu/Bapak/Sdr menjawab pertanyaan daya karsa yang saya ajukan. Tujuan penelitian ini adalah untuk mendapatkan informasi mengenai dayakarsa sehingga dapat digunakan dalam membina orang-orang agar mempunyai dayakarsa yang tinggi. Dayakarsa ini sangat diperlukan dalam mencapai suatu keberhasilan.

Terima kasih atas bantuannya.

Hormat saya,
Luh Ketut Suryani

Lengkapi informasi berikut

Laki-laki Perempuan

Umur: _____ tahun

Agama:

Pekerjaan: _____

Pendidikan yang Dicapai Terakhir:

- | | | |
|------------------|--------------------|----------------|
| 1. Tidak Sekolah | 2. Sekolah Dasar | 3. SMP |
| 4. SMA | 5. Akademi/Diploma | 6. Universitas |

Perkawinan: 1. Belum kawin 2. Kawin 3. Cerai
4. Janda/duda 5. Pisah

Suku:

Mendapat Pengaruh Budaya Luar: 1. Banyak (banyak bergaul dengan orang luar Bali dan Banyak nonton TV)
2. Sedikit (jarang bergaul dengan orang luar Bali dan jarang nonton TV)

Tempat Anda dibesarkan : 1. Di daerah Perkotaan
2. Di daerah Pedesaan
3. Di daerah Pariwisata

Bacalah setiap nomor dengan seksama, dan beri tanda rumput pada nomor yang sesuai dengan jawaban Anda. Misalnya, jika pernyataan Anda sangat benar, beri tanda rumput pada kotak no 5; jikalau sangat tidak benar sama sekali untuk Anda, beri tanda rumput pada kotak no 1; pernyataan lainnya beri tanda rumput kotak no 2, 3, atau 4 sesuai dengan jawaban Anda. Beberapa pertanyaan mungkin terlihat berulang-ulang, tetapi pertimbangkan bahwa setiap nomor tidak bergantung dengan yang lain.

	Tidak		Benar		
	1	2	3	4	5
1. Saya tidak mempunyai kemampuan dalam mengatur kegiatan saya sehari-hari	<input type="checkbox"/>				
2. Saya mempunyai keteguhan hati yang kuat	<input type="checkbox"/>				
3. Saya senang menikmati kehidupan duniawi	<input type="checkbox"/>				
4. Saya mendapat kesulitan untuk membantu orang lain mengatasi stres dengan berhasil baik	<input type="checkbox"/>				
5. Saya sukar menghindari kebiasaan buruk dan membahayakan diri saya	<input type="checkbox"/>				
6. Saya dapat bertahan dari pengaruh orang lain.	<input type="checkbox"/>				
7. Saya bertindak dengan kesadaran kuat akan kewajiban kepada keluarga saya.	<input type="checkbox"/>				

8. Saya sukar untuk tetap kukuh pada keputusan saya sendiri.
9. Saya sukar untuk rileks (santai) secara jasmani
10. Saya sering mengarahkan orang lain untuk tujuan bersama.
11. Saya sering terpengaruh oleh godaan di dalam mencapai tujuan masa depan
12. Saya jarang bisa asyik atau terpaku dengan apa yang sedang saya kerjakan
13. Saya mengetahui apa yang saya inginkan dalam kebanyakan situasi.

Tidak **Benar**

1 **2** **3** **4** **5**

14. Pada umumnya saya penuh tenaga dan gairah hidup
15. Orang lain jarang meminta saran saya ketika mereka dalam kesusahan
16. Saya sulit untuk menghindari setiap godaan yang menimpa diri saya
17. Pada umumnya saya memilih waktu yang tepat untuk bertindak
18. Saya sulit bertahan terhadap pengaruh negatif untuk diri saya
19. Saya sulit menanggulangi stres dengan baik
20. Saya mampu mempengaruhi tindakan orang lain
21. Saya mengendalikan kebiasaan saya
22. Saya jarang mengambil inisiatif
23. Saya sering mengalami kesulitan agar pandangan saya dipertimbangkan oleh orang lain

- | | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 24. Pada umumnya saya percaya diri | <input type="checkbox"/> |
| 25. Saya menjaga kondisi fisik saya dengan baik | <input type="checkbox"/> |
| 26. Saya mempunyai kemampuan membantu orang lain menghindari stres | <input type="checkbox"/> |
| 27. Saya kurang disiplin diri | <input type="checkbox"/> |
| 28. Saya mampu mempengaruhi teman dekat saya pada saat yang tepat | <input type="checkbox"/> |
| 29. Saya bertindak dengan kesadaran kuat akan kewajiban kepada masyarakat | <input type="checkbox"/> |
| 30. Pendapat saya sering berubah | <input type="checkbox"/> |
| | Tidak | | | | Benar |
| | 1 | 2 | 3 | 4 | 5 |
| 31. Saya mampu membuat orang lain gembira | <input type="checkbox"/> |
| 32. Pada umumnya saya bebas dari kebiasaan yang saya tidak inginkan | <input type="checkbox"/> |
| 33. Saya tidak melakukan sesuatu jika orang lain merasa bahwa itu di luar kemampuan saya | <input type="checkbox"/> |
| 34. Saya kurang gigih bertahan | <input type="checkbox"/> |
| 35. Saya mengembangkan dan menjaga kepercayaan yang saya anut | <input type="checkbox"/> |
| 36. Saya menganggap diri saya seorang yang beruntung | <input type="checkbox"/> |
| 37. Saya tidak sangat mampu dalam membantu orang lain menyelesaikan masalahnya | <input type="checkbox"/> |
| 38. Dalam hidup saya, saya sering membiarkan sesuatu di luar kendali diri saya | <input type="checkbox"/> |
| 39. Saya mudah memperbaiki diri saya | <input type="checkbox"/> |
| 40. Saya bisa memusatkan semua perhatian saya dalam satu hal | <input type="checkbox"/> |

- | | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 41. Saya sulit mengatasi rintangan | <input type="checkbox"/> |
| 42. Saya sukar santai secara mental | <input type="checkbox"/> |
| 43. Saya mampu membantu orang lain belajar | <input type="checkbox"/> |
| 44. Saya sulit mengambil keputusan, sekalipun yang kecil | <input type="checkbox"/> |
| 45. Saya mampu membantu orang lain mengenali bahwa mereka mengalami stres | <input type="checkbox"/> |
| 46. Saya sulit menerima bertanggung jawab bila dalam suatu kelompok | <input type="checkbox"/> |
| 47. Saya sulit untuk bertahan sepanjang diperlukan | <input type="checkbox"/> |
| | Tidak | | | | Benar |
| | 1 | 2 | 3 | 4 | 5 |
| 48. Nasib saya ada ditangan saya sendiri | <input type="checkbox"/> |
| 49. Saya tidak bisa mengatasi dengan baik ketika saya ketakutan ketika keselamatan fisik saya terancam | <input type="checkbox"/> |
| 50. Saya bertanggungjawab atas keputusan penting yang mempengaruhi orang lain | <input type="checkbox"/> |
| 51. Saya sukar mendorong pikiran saya untuk bekerja pada tingkat yang tinggi bila diperlukan | <input type="checkbox"/> |
| 52. Saya mudah menjadi hanyut dalam pikiran saya sendiri | <input type="checkbox"/> |
| 53. Saya dengan mudah bisa mengatur hal-hal di sekitar saya seperti yang saya kehendaki | <input type="checkbox"/> |
| 54. Saya sukar mempertahankan harga diri saya | <input type="checkbox"/> |
| 55. Saya kurang bisa mempengaruhi nilai-nilai dan kepercayaan orang lain | <input type="checkbox"/> |
| 56. Saya sulit untuk menghindarkan diri dari kepuasan dalam meraih suatu tujuan untuk masa depan | <input type="checkbox"/> |
| 57. Saya dapat menjadi dominan pada saat yang tepat | <input type="checkbox"/> |

58. Saya mampu mengendalikan emosi saya
59. Saya sulit menghilangkan kebiasaan saya yang jelek
60. Saya mempunyai daya ingat yang baik
61. Saya jarang menang dalam menghadapi lawan yang gigih
62. Saya sulit menangani rasa takut psikologis saya
63. Saya mampu membantu orang lain mengembangkan mentalnya
- Tidak** **Benar**
- 1** **2** **3** **4** **5**
64. Saya mengubah pikiran saya pada saat yang tepat
65. Saya orang yang tidak sabar
66. Dalam mengejar tujuan untuk masa depan, saya bisa mendorong diri saya untuk melakukakan sesuatu yang tidak saya inginkan,

Untuk setiap nomor, berikan peringkat seberapa kuat perasaan Anda sesuai dengan pertanyaan

- Sama sekali** **banyak**
- 1** **2** **3** **4** **5**
67. Waktu kanak-kanak seberapa kuat orang tua Anda memperhatikan keinginan Anda?
68. Apakah orang tua Anda membuat Anda merasa bahwa Anda mampu menjadi apa pun yang Anda inginkan?
69. Pernahkah Anda kadang-kadang mampu memperoleh jalan Anda sendiri meskipun bertentangan dengan orang yang berkuasa (seperti orang tua, guru)?

81. Saya melakukan apa yang saya yakini tanpa memikirkan apakah orang lain setuju atau tidak

82. Saya mengikuti hati nurani saya dalam bertindak

Mohon Komentar Anda

1. Apakah pertanyaan yang diberikan terlalu panjang?

Berapa panjang sebaiknya pertanyaan yang diberikan?

Apakah dalam menjawab pertanyaan ini memerlukan pemikiran yang dalam? (misalnya Anda menjadi lelah dan tidak memikirkan pertanyaan itu lagi)

2. Apakah pertanyaan ini terlalu sulit?

Sebutkan nomor pertanyaan yang tidak jelas

Sebutkan nomor pertanyaan yang terlalu rumit (dalam konsep atau penulisan)

Apakah Anda memahami segala sesuatu dalam pertanyaan itu?

3. Apakah ada pertanyaan sangat pribadi untuk Anda untuk dijawab secara jujur? Bila ya, sebutkan No.

4. Apakah pertanyaan itu terlalu berlebihan (pertanyaan mana kelihatannya menanyakan hal yang sama)? Bila ya, sebutkan No. berapa?

5. Apakah ada pertanyaan lain yang dapat membantu memahami semangat juang yang belum ditanyakan

Sekali lagi, Terima kasih atas bantuan Ibu/Bapak/Sdr. telah bersedia menjawab pertanyaan-pertanyaan ini.

Peneliti

Prof. Dr. dr. Luh Ketut Suryani, SpKJ

Appendix III

Comparison between BVCQ and VCQ'98 – Factor Analysis

THIS ANALYSIS WAS DONE FOR COMPARISON PURPOSES ONLY –
THE ITEMS INCLUDED WERE ONLY THOSE THAT WERE PRESENT IN BOTH VERSIONS OF
THE QUESTIONNAIRE.

VCQ'98 Items excluded from the analysis as no corresponding item in the BVCQ:

VCQ 12. I rarely do something when others advise me against it.
VCQ 18. I am good at understanding complex arguments.
VCQ 33. When I am sick, my recovery can be slow.
VCQ 47. I rarely fall ill.
VCQ 55. I am aware of my own habits.
VCQ 61. I am good at controlling my existing habits.
VCQ 63. I avoid responsibility for important decisions affecting my own life.
VCQ 71. I find it difficult to delay gratification.

BVCQ Items excluded from the analysis as no corresponding item in the VCQ '98

BVCQ 67. In your childhood how important were your wishes to your parents?
BVCQ 68. Did your parents make you feel that you could become whatever you wanted to be?
BVCQ 69. Were you sometimes able to get your own way despite objections from those in authority (e.g. parents and teachers)?
BVCQ 70. Do you believe that events in your life are directed by a superior power/being?
BVCQ 71. Do you feel you have much influence over the direction of your life (events, successes, etc)?
BVCQ 72. How sure do you have to be about successfully achieving your goal before you act?
BVCQ 73. How comfortable are you in dealing with situations where the outcome is uncertain?
BVCQ 74. Do you believe that your intelligence is something about you that you can't change very much?
BVCQ 75. Do you believe that a person's moral character is something basic about them and it can't be changed very much?
BVCQ 76. Do you think that you can control the events and things around you?
BVCQ 77. I feel that others are running my life for me.
BVCQ 78. I feel that whether or not I am successful it is just a matter of luck and chance, rather than my own doing.
BVCQ 79. I worry a lot about offending or hurting someone close to me.
BVCQ 80. I worry about shaming myself.
BVCQ 81. I do anything I am convinced of without considering others' opinions, whether they agree with me or not.
BVCQ 82. I follow my conscience in doing many things.

Additionally – BVCQ 56 (and VCQ62) was also excluded due to administration problems:
BVCQ 56. I find it difficult to forgo gratification in pursuit of a future goal.

- Items that were changed slightly from one version to the other were not excluded.
- Total Items included in Factor Analysis: 65 items

Appropriateness of data set for factor analysis: skewness and kurtosis

EFA requires univariate normality of the variables - i.e. that each of the variables used conforms to the normal distribution curve, and this is indicated by skewness and kurtosis. Skewness describes the extent of symmetry of a distribution (whether the mean is in the centre of the distribution), and kurtosis summarises the 'peakedness' of a distribution. Skewness or kurtosis coefficients of less than +/-2.0 are acceptable. In

- VCQ '98: no variable had a skewness or kurtosis value which exceed +/-2.0.
- BVCQ: 2 variables had a skewness or kurtosis value which both exceeded +/-2.0 and were therefore excluded:

skew	kurtosis	Item
-2.164	4.976	BVCQ 35. I develop and maintain strong beliefs.
-2.281	5.670	BVCQ 07. I act with a firm sense of duty toward my family

Appropriateness of the correlation matrix

It is essential to show that there are actual discoverable relationships among the variables before proceeding with EFA in order to ensure that the results produced can be interpreted meaningfully.

Two statistical procedures are recommended for this purpose:

1. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy indicates whether the correlations in the correlation matrix can be accounted for by a smaller number of factors than the number of variables present.

KMO values above .6 are good for factor analysis (Tabachnick and Fidell, 1996).

- VCQ '98: KMO test = .881
- BVCQ: KMO test = .890

2. The Bartlett test of Sphericity (BS) tests the null hypothesis that there are no relationships between any of the variables. It is advisable to compute this statistic when the subject to variable ratio is less than 5.

- VCQ'98 : BS $\chi^2 = 8888.114$ (df-2080), $p < .0001$
- BVCQ : BS $\chi^2 = 8253.398$ (df-1953), $p < .0001$

Item analysis

Item-total correlations indicate the extent to which individual items are associated with the total score of the scale being analysed. It is recommended that items which correlate with the total score at less than .3 should be omitted from the scale.

The Cronbach alpha coefficient of the whole item pool indicates the internal reliability of the scale as a whole. Ideally this should be above .8.

- VCQ'98: cronbach $\alpha = .9265$ (cfr. .9312 for VCQ'98 all items)
- BVCQ : Cronbach $\alpha = .9184$

The following items had item-total correlations $< .25$ and were therefore excluded from the analysis: It was decided to keep items that correlate between .25 and .3 in the analysis.

VCQ'98 item-total correlations of $< .25$

Item	correlation	
VCQ 3	.2258	VCQ 03. I enjoy life's pleasures.
VCQ 7	.2267	VCQ 07. I act with a firm sense of duty toward my family.
VCQ 36	.1852	VCQ 36. I don't take on things that others feel are beyond my capability.
VCQ 39	.2269	VCQ 39. I consider myself a lucky person.
VCQ 57	-.1746	VCQ 57. I readily become absorbed in my own thoughts.
VCQ 72	.1957	VCQ 72. I change my mind when appropriate.
VCQ 73	.2055	VCQ 73. I am impatient.

BVCQ Items with item-total correlation <.25

Item	correlation	
BVCQ 03	.0250	BVCQ 03. I enjoy life's pleasures.
BVCQ 10	.1849	BVCQ 10. I often lead others toward a common goal.
BVCQ 33	.2475	BVCQ 33. I don't take on things others feel are beyond my capability.
BVCQ 48	.1547	BVCQ 48. I am in control of my own destiny.
BVCQ 50	.2308	BVCQ 50. I take responsibility for important decisions affecting others.
BVCQ 51	-.1586	BVCQ 51. I can will my mind to perform at a high level when needed.
BVCQ 66	.0512	BVCQ 66. To accomplish a goal, I can will myself to do things that I would rather not do.

As a result of the analysis, the following items were excluded from the analysis – the table indicates whether the item was excluded from one or both of the questionnaires.

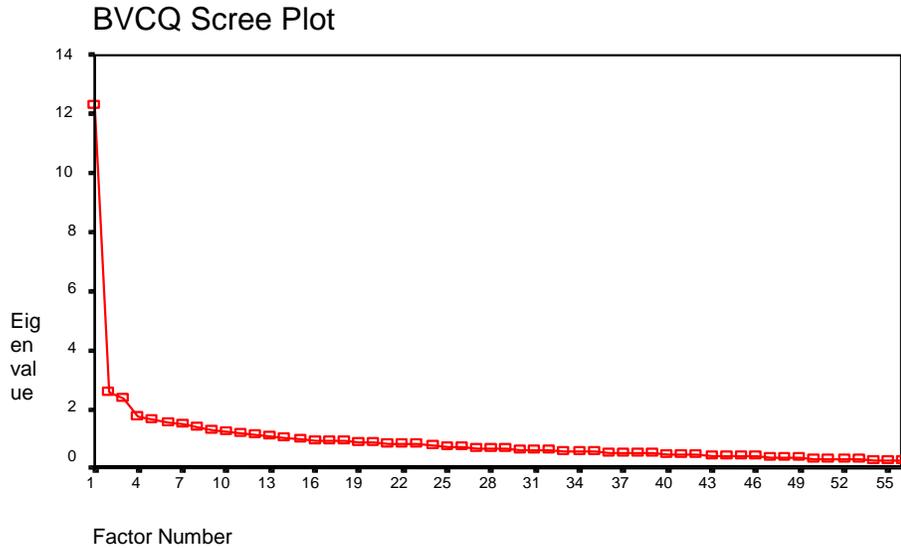
excluded from:		Item
VCQ	BVCQ	
3	3	I enjoy life's pleasures.
7	7	I act with a firm sense of duty toward my family
	10	I often lead others toward a common goal.
36	33	I don't take on things others feel are beyond my capability.
	35	I develop and maintain strong beliefs.
39		I consider myself a lucky person.
	48	I am in control of my own destiny.
	50	I take responsibility for important decisions affecting others.
	51	I can will my mind to perform at a high level when needed.
56		I readily become absorbed in my own thoughts.
72		I change my mind when appropriate
73		I am impatient.
	66	To accomplish a goal, I can will myself to do things that I would rather not do.

Selection of number of factors to extract

VCQ '98 Scree Plot

- Suggests possibly 3 or 5 factors
- A 5-factor solution was chosen on the basis of the significantly greater variance explained:

N. Factors	Total Variance Explained
3	33.461
5	40.462



BVCQ Scree Plot:

- Suggests a very clear cut at a 3-factor solution and also a 5-factor solutions
- 5-factor solution was chosen on the basis of the significantly greater variance explained, though data from a 3 factor solution was also analysed for comparison purposes

Method of factor extraction

Two methods of factor analysis are available:

- principal components analysis (PCA)
- principal factors analysis/principal axes method (PFA)

PFA is the most appropriate method to use for analysis of the VCQ/ BVCQ as it does not attempt to distribute all the variance in the correlation matrix into factors, as PCA does.

Method of factor rotation

There are two main methods of rotation:

- Orthogonal rotation assumes independence of factors;
- Oblique rotation assumes there to be inter-correlation among factors.

An orthogonal solution was first attempted to compute the matrix of correlations between factors. If correlations are deemed significant (usually $>.3$), then an oblique solution is more suitable for the data.

VCQ –

Factor Correlation Matrix

Factor	1	2	3	4	5
1					
2	.214				
3	-.234	-.024			
4	.457	.019	-.314		
5	-.411	-.348	.210	-.267	

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

- As 4 correlations were above .3 with another 3 above .2 – an oblique solution was chosen.

BVCQ

5-Factor Correlation Matrix

Factor	1	2	3	4	5
1					
2	.272				
3	.287	.262			
4	.351	.188	.261		
5	.361	.246	.360	.284	

3-Factor Correlation Matrix

Factor	1	2	3
1			
2	.265		
3	.506	.210	

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

- The picture for the BVCQ is not as clear cut :
- An orthogonal solution would be suggested on the basis of :
 - only 3 correlations being above .3, none of them very strong
 - a 5-factor oblique solution needing 32 iterations, compared to 5 for an orthogonal solution
- However, an oblique solution was attempted as :
 - though none of the correlations were very strong, all of them were nearing .2 or over
 - correlations within a 3-factor solution were strong
 - on the basis of the decision made for the VCQ

Factor Analyses:

Oblique rotation produces two factor matrices of loadings:

- factor pattern matrix:

(weighted loadings which represent the unique contribution that each variable makes to the factor)

- factor structure matrix.

(simple correlations between variables and factors)

For ease of comparison, the pattern structures were interpreted first – please note that cross-loadings are not reported.

VCQ		
Factor 1	loading	Item
VCQ37	0.646	VCQ 37. I have little persistence.
VCQ51	0.599	VCQ 51. I am rarely able to keep striving when necessary.
VCQ74	0.499	VCQ 74. I can will myself to do things that I would rather not do, in pursuit of a future goal.
VCQ13	0.478	VCQ 13. I rarely become absorbed in what I am doing.
VCQ08	0.454	VCQ 08. I often change my decisions.
VCQ43	0.426	VCQ 43. I focus all my attention on one thing, when appropriate.
VCQ32	0.412	VCQ 32. My opinions often change.
VCQ56	0.410	VCQ 56. I have difficulty willing my mind to perform at a high level when needed.
VCQ11	0.399	VCQ 11. I often refrain from yielding to temptations in pursuit of a future goal.
VCQ02	0.392	VCQ 02. I have strong determination.
VCQ38	0.345	VCQ 38. I develop and maintain strong beliefs

Factor 2	loading	Item
VCQ04	0.714	VCQ 04. I find it hard to help others deal effectively with stress.
VCQ28	0.710	VCQ 28. I am not very good at helping others avoid stress.
VCQ49	0.657	VCQ 49. I am good at helping others recognise stress.
VCQ40	0.649	VCQ 40. I am not very good at helping others solve their problems.
VCQ70	0.511	VCQ 70. I am good at helping others develop mentally.
VCQ16	0.454	VCQ 16. Others rarely ask my advice when they are in a difficult situation.
VCQ46	0.408	VCQ 46. I am good at helping others learn.
VCQ60	0.399	VCQ 60. I have little influence on others' values and beliefs.
VCQ34	0.382	VCQ 34. I am good at making other people happy.

Factor 3	loading	Item
VCQ09	-0.679	VCQ 09. I find it hard to relax physically.
VCQ45	-0.673	VCQ 45. I find it hard to relax mentally.
VCQ21	-0.581	VCQ 21. I do not cope well with stress.
VCQ65	-0.399	VCQ 65. I am good at controlling my emotions.
VCQ69	-0.396	VCQ 69. I do not deal effectively with psychological fear.
VCQ44	-0.335	VCQ 44. I have difficulty overcoming adversity.

Factor 4	loading	Item
VCQ05	0.832	VCQ 05. I find it difficult to avoid harmful and bad habits.
VCQ35	0.796	VCQ 35. I am generally free of unwanted habits.
VCQ66	0.765	VCQ 66. I have difficulty eliminating unwanted habits.
VCQ23	0.707	VCQ 23. I am in control of my habits.
VCQ17	0.563	VCQ 17. I am not good at avoiding temptation.
VCQ29	0.469	VCQ 29. I have little self-discipline.
VCQ41	0.386	VCQ 41. I often let things in my life get out of control.
VCQ01	0.337	VCQ 01. I am not good at organising my daily activities.
VCQ20	0.333	VCQ 20. I find it hard to resist negative influences.

Factor 5	loading	Item
VCQ22	-0.696	VCQ 22. I am good at influencing others' course of action.
VCQ10	-0.598	VCQ 10. I often lead others toward a common goal.
VCQ26	-0.569	VCQ 26. I am generally self-confident.
VCQ50	-0.547	VCQ 50. I rarely take responsibility when in a group.
VCQ64	-0.544	VCQ 64. I can be dominant when appropriate.
VCQ24	-0.461	VCQ 24. I rarely take the initiative.
VCQ48	-0.459	VCQ 48. I find it hard to make decisions, even if they are minor ones.
VCQ58	-0.437	VCQ 58. I find it easy to make things in my immediate physical world happen as I would like.
VCQ14	-0.433	VCQ 14. I know what I want in most situations.
VCQ59	-0.432	VCQ 59. I have difficulty maintaining high self-esteem.
VCQ15	-0.426	VCQ 15. I am generally full of energy and vitality
VCQ54	-0.377	VCQ 54. I avoid taking responsibility for important decisions affecting others.
VCQ30	-0.373	VCQ 30. I can influence my close friends when appropriate.
VCQ42	-0.303	VCQ 42. I find it easy to improve myself.

BVCQ - Pattern Matrix

Factor 1	loading	Item
BVCQ22	0.568	BVCQ 22. I rarely take the initiative.
BVCQ61	0.480	BVCQ 61. I rarely win games with competitive partners.

BVCQ30	0.479	BVCQ 30. My opinions often change
BVCQ34	0.468	BVCQ 34. I have little persistence
BVCQ08	0.421	BVCQ 08. I find it difficult to stick to my decisions
BVCQ55	0.396	BVCQ 55. I have little influence on others' values and beliefs.
BVCQ23	0.389	BVCQ 23. I often have a hard time having my views taken seriously by others.
BVCQ44	0.351	BVCQ 44. I find it hard to make decisions, even if they are minor ones.
BVCQ27	0.300	BVCQ 27. I have little self-discipline
BVCQ52	-0.337	BVCQ 52. I readily become absorbed in my own thoughts

Factor 2 | loading Item

BVCQ63	0.540	BVCQ 63. I am good at helping others develop mentally.
BVCQ20	0.510	BVCQ 20. I am good at influencing others' course of action.
BVCQ28	0.508	BVCQ 28. I can influence my close friends when appropriate.
BVCQ45	0.504	BVCQ 45. I am good at helping others recognize stress.
BVCQ26	0.477	BVCQ 26. I am good at helping others avoid stress.
BVCQ15	0.442	BVCQ 15. Others rarely ask my advice when they are in a difficult situation.
BVCQ31	0.406	BVCQ 31. I am good at making other people happy.
BVCQ57	0.379	BVCQ 57. I can be dominant when appropriate.
BVCQ37	0.354	BVCQ 37. I am not very good at helping others solve their problems.
BVCQ43	0.347	BVCQ 43. I am good at helping others learn.

Factor 3 | loading Item

BVCQ64	0.508	BVCQ 64. I am able to change my mind when appropriate.
BVCQ21	0.473	BVCQ 21. I am in control of my habits.
BVCQ39	0.465	BVCQ 39. I find it easy to improve myself.
BVCQ24	0.458	BVCQ 24. I am generally self-confident.
BVCQ29	0.414	BVCQ 29. I act with a firm sense of duty to society.
BVCQ40	0.392	BVCQ 40. I can focus all my attention on one thing.
BVCQ17	0.387	BVCQ 17. I generally choose the right time to take action.
BVCQ02	0.380	BVCQ 02. I have strong determination
BVCQ14	0.364	BVCQ 14. I am generally full of energy and vitality.
BVCQ58	0.362	BVCQ 58. I am good at controlling my emotions.
BVCQ32	0.353	BVCQ 32. I am generally free of unwanted habits
BVCQ25	0.340	BVCQ 25. I keep myself in good physical shape.
BVCQ60	0.339	BVCQ 60. I have a good memory.
BVCQ36	0.317	BVCQ 36. I consider myself a lucky person.

Factor 4 | loading Item

BVCQ65	0.494	BVCQ 65. I am impatient.
BVCQ62	0.460	BVCQ 62. I do not deal effectively with psychological fear.
BVCQ49	0.444	BVCQ 49. I do not deal effectively when fearful for my physical well being.
BVCQ59	0.440	BVCQ 59. I have difficulty eliminating bad (rather than "unwanted") habits.
BVCQ19	0.420	BVCQ 19. I do not cope well with stress.
BVCQ42	0.401	BVCQ 42. I find it hard to relax mentally.
BVCQ38	0.367	BVCQ 38. I often let things in my life get out of control.

Factor 5 | loading Item

BVCQ09	0.542	BVCQ 09. I find it hard to relax physically
BVCQ18	0.443	BVCQ 18. I find it hard to resist negative influences to myself .
BVCQ12	0.366	BVCQ 12. I rarely become absorbed in what I am doing.
BVCQ01	0.347	BVCQ 01. I am not good at organizing my daily activities
BVCQ16	0.322	BVCQ 16. I am not good at avoiding temptation which come to me .

BVCQ11 | 0.317 BVCQ 11. I often yield to temptations which get in the way of pursuing a future goal.

BVCQ 3-factor Pattern Matrix

Factor 1	loading	
BVCQ62	0.625	BVCQ 62. I do not deal effectively with psychological fear.
BVCQ34	0.609	BVCQ 34. I have little persistence
BVCQ19	0.606	BVCQ 19. I do not cope well with stress.
BVCQ59	0.585	BVCQ 59. I have difficulty eliminating bad (rather than "unwanted") habits.
BVCQ16	0.572	BVCQ 16. I am not good at avoiding temptation which come to me .
BVCQ61	0.540	BVCQ 61. I rarely win games with competitive partners.
BVCQ41	0.527	BVCQ 41. I have difficulty overcoming adversity.
BVCQ30	0.524	BVCQ 30. My opinions often change
BVCQ42	0.524	BVCQ 42. I find it hard to relax mentally.
BVCQ49	0.489	BVCQ 49. I do not deal effectively when fearful for my physical well being.
BVCQ23	0.483	BVCQ 23. I often have a hard time having my views taken seriously by others.
BVCQ22	0.465	BVCQ 22. I rarely take the initiative.
BVCQ38	0.463	BVCQ 38. I often let things in my life get out of control.
BVCQ18	0.456	BVCQ 18. I find it hard to resist negative influences to myself .
BVCQ55	0.429	BVCQ 55. I have little influence on others' values and beliefs.
BVCQ47	0.424	BVCQ 47. I find it difficult to keep striving as long as necessary.
BVCQ65	0.424	BVCQ 65. I am impatient.
BVCQ44	0.419	BVCQ 44. I find it hard to make decisions, even if they are minor ones.
BVCQ08	0.400	BVCQ 08. I find it difficult to stick to my decisions
BVCQ27	0.400	BVCQ 27. I have little self-discipline
BVCQ46	0.378	BVCQ 46. I find taking responsibility difficult when in a group.
BVCQ04	0.360	BVCQ 04. I find it hard to help others deal effectively with stress
BVCQ54	0.331	BVCQ 54. I have difficulty maintaining self-esteem (left out "high.")
BVCQ37	0.322	BVCQ 37. I am not very good at helping others solve their problems.
BVCQ05	0.313	BVCQ 05. I find it difficult to avoid harmful and bad habits in myself
BVCQ52	-0.444	BVCQ 52. I readily become absorbed in my own thoughts

Factor 2	loading	
BVCQ20	0.507	BVCQ 20. I am good at influencing others' course of action.
BVCQ28	0.497	BVCQ 28. I can influence my close friends when appropriate.
BVCQ63	0.468	BVCQ 63. I am good at helping others develop mentally.
BVCQ15	0.433	BVCQ 15. Others rarely ask my advice when they are in a difficult situation.
BVCQ45	0.430	BVCQ 45. I am good at helping others recognise stress.
BVCQ26	0.424	BVCQ 26. I am good at helping others avoid stress.
BVCQ31	0.375	BVCQ 31. I am good at making other people happy.

Factor 3	loading	
BVCQ39	0.506	BVCQ 39. I find it easy to improve myself.
BVCQ21	0.501	BVCQ 21. I am in control of my habits.
BVCQ32	0.490	BVCQ 32. I am generally free of unwanted habits
BVCQ64	0.471	BVCQ 64. I am able to change my mind when appropriate.
BVCQ24	0.457	BVCQ 24. I am generally self-confident.
BVCQ40	0.444	BVCQ 40. I can focus all my attention on one thing.
BVCQ14	0.425	BVCQ 14. I am generally full of energy and vitality.
BVCQ02	0.425	BVCQ 02. I have strong determination

BVCQ29	0.419	BVCQ 29. I act with a firm sense of duty to society.
BVCQ36	0.407	BVCQ 36. I consider myself a lucky person.
BVCQ60	0.397	BVCQ 60. I have a good memory.
BVCQ58	0.384	BVCQ 58. I am good at controlling my emotions.
BVCQ57	0.378	BVCQ 57. I can be dominant when appropriate.
BVCQ17	0.371	BVCQ 17. I generally choose the right time to take action.
BVCQ43	0.370	BVCQ 43. I am good at helping others learn.
BVCQ25	0.364	BVCQ 25. I keep myself in good physical shape.
BVCQ53	0.304	BVCQ 53. I find it easy to make things in my immediate physical world happen as I would like.

Items that Do not Load

VCQ – 5-factor Pattern

VCQ	BVCQ	loading	
VCQ06	n.l.		VCQ 06. I can resist being influenced by other people.
VCQ19	3		VCQ 19. I generally choose the right time to take action.
VCQ25	3		VCQ 25. I often have a hard time having my views taken seriously by others.
VCQ27	3		VCQ 27. I keep myself in good physical shape.
VCQ31	3		VCQ 31. I act with a firm sense of duty to society.
VCQ52	not incl.		VCQ 52. I am in control of my own destiny.
VCQ53	4		VCQ 53. I do not deal effectively with physical fear.
VCQ67	3		VCQ 67. I have a good memory.
VCQ68	1		VCQ 68. I rarely win games with competitive partners.

BVCQ – 5-factor -pattern

BVCQ	VCQ	loading	
BVCQ04	2		BVCQ 04. I find it hard to help others deal effectively with stress
BVCQ05	4		BVCQ 05. I find it difficult to avoid harmful and bad habits in myself
BVCQ06	n.l.		BVCQ 06. I can resist being influenced by other people
BVCQ13	5-		BVCQ 13. I know what I want in most situations.
BVCQ41	3-		BVCQ 41. I have difficulty overcoming adversity.
BVCQ46	5-		BVCQ 46. I find taking responsibility difficult when in a group.
BVCQ47	1		BVCQ 47. I find it difficult to keep striving as long as necessary.
BVCQ53	5-		BVCQ 53. I find it easy to make things in my immediate physical world happen as I would like.
BVCQ54	5- (3-)		BVCQ 54. I have difficulty maintaining self-esteem (left out "high.")

BVCQ – 3-factor-pattern

BVCQ	VCQ	loading	
BVCQ01	4		BVCQ 01. I am not good at organizing my daily activities
BVCQ06	n.l.		BVCQ 06. I can resist being influenced by other people
BVCQ09	3		BVCQ 09. I find it hard to relax physically
BVCQ11	1		BVCQ 11. I often yield to temptations which get in the way of pursuing a future goal.
BVCQ12	1		BVCQ 12. I rarely become absorbed in what I am doing.
BVCQ13	5-		BVCQ 13. I know what I want in most situations.

Comparison between BVCQ factors and VCQ factors:

BVCQ Item	BVCQ 5-factor	BVCQ 3-factors	VCQ item	VCQ loading
BVCQ08	1	1	VCQ08	1
BVCQ30	1	1	VCQ32	1
BVCQ34	1	1	VCQ37	1
BVCQ55	1	1	VCQ60	2 (-5)
BVCQ27	1	1	VCQ29	4 (1)
BVCQ22	1	1	VCQ24	5-
BVCQ44	1	1	VCQ48	5-
BVCQ61	1	1	VCQ68	n.l.
BVCQ23	1 (2)	1	VCQ25	n.l.
BVCQ52	1-	1-	VCQ57	not incl.

BVCQ Item	BVCQ 5-factor	BVCQ 3-factors	VCQ item	VCQ loading
BVCQ15	2	2	VCQ16	2
BVCQ26	2	2	VCQ28	2
BVCQ31	2	3	VCQ34	2
BVCQ37	2	1 (2)	VCQ40	2
BVCQ45	2	2	VCQ49	2
BVCQ63	2	2	VCQ70	2 (-5)
BVCQ43	2 (3)	3 (2)	VCQ46	2
BVCQ57	2 (3)	3 (2)	VCQ64	5-
BVCQ20	2	2	VCQ22	5-
BVCQ28	2	2	VCQ30	5-

BVCQ Item	BVCQ 5-factor	BVCQ 3-factors	VCQ item	VCQ loading
BVCQ02	3	3	VCQ02	1
BVCQ40	3	3	VCQ43	1
BVCQ21	3	3	VCQ23	4
BVCQ32	3 (5)	3	VCQ35	4
BVCQ14	3	3	VCQ15	5-
BVCQ39	3	3	VCQ42	5-
BVCQ24	3	3	VCQ26	5- (3-)
BVCQ58	3 (4)	3	VCQ65	3-
BVCQ17	3	3	VCQ19	n.l.
BVCQ25	3	3	VCQ27	n.l.
BVCQ29	3	3	VCQ31	n.l.
BVCQ60	3	3	VCQ67	n.l.
BVCQ36	3	3	VCQ39	not incl.
BVCQ64	3	3	VCQ72	not incl.

BVCQ Item	BVCQ 5-factor	BVCQ 3-factors	VCQ item	VCQ loading
BVCQ65	4	1	VCQ74	1
BVCQ38	4	1	VCQ41	4
BVCQ59	4	1	VCQ66	4
BVCQ62	4	1	VCQ69	3- (5-)
BVCQ19	4 (5)	1	VCQ21	3-
BVCQ42	4 (5)	1	VCQ45	3-
BVCQ49	4	1	VCQ53	n.l.

BVCQ Item	BVCQ 5-factor	BVCQ 3-factors	VCQ item	VCQ loading
BVCQ11	5	n.l.	VCQ11	1
BVCQ12	5	n.l.	VCQ13	1
BVCQ01	5	n.l.	VCQ01	4
BVCQ16	5	1	VCQ17	4
BVCQ18	5	1	VCQ20	4
BVCQ09	5	n.l.	VCQ09	3-

Comparison between VCQ factor loadings and BVCQ factor loadings

VCQ Item	VCQ loading	BVCQ item	BVCQ 5-factor	BVCQ 3-factors
VCQ08	1	BVCQ08	1	1
VCQ32	1	BVCQ30	1	1
VCQ37	1	BVCQ34	1	1
VCQ02	1	BVCQ02	3	3
VCQ43	1	BVCQ40	3	3
VCQ74	1	BVCQ66	not incl.	not incl.
VCQ11	1	BVCQ11	5	n.l.
VCQ13	1	BVCQ12	5	n.l.
VCQ51	1	BVCQ47	<.25	1
VCQ38	1	BVCQ35	not incl.	not incl.
VCQ56	1	BVCQ51	not incl.	not incl.

VCQ Item	VCQ loading	BVCQ item	BVCQ 5-factor	BVCQ 3-factors
VCQ16	2	BVCQ15	2	2
VCQ28	2	BVCQ26	2	2
VCQ34	2	BVCQ31	2	2
VCQ40	2	BVCQ37	2	1 (2)
VCQ49	2	BVCQ45	2	2
VCQ04	2	BVCQ04	<.25	1
VCQ46	2	BVCQ43	2 (3)	3 (2)
VCQ60	2 (-5)	BVCQ55	1	1
VCQ70	2 (-5)	BVCQ63	2	2

VCQ Item	VCQ loading	BVCQ item	BVCQ 5-factor	BVCQ 3-factors
VCQ09	3-	BVCQ09	5	n.l.
VCQ44	3-	BVCQ41	<.25	1
VCQ65	3-	BVCQ58	3 (4)	3
VCQ21	3-	BVCQ19	4 (5)	1
VCQ45	3-	BVCQ42	4 (5)	1
VCQ69	3- (-5)	BVCQ62	4	1

VCQ Item	VCQ loading	BVCQ item	BVCQ 5-factor	BVCQ 3-factors
VCQ23	4	BVCQ21	3	3
VCQ41	4	BVCQ38	4	1
VCQ66	4	BVCQ59	4	1
VCQ01	4	BVCQ01	5	n.l.
VCQ17	4	BVCQ16	5	1

VCQ20	4	BVCQ18	5	1
VCQ05	4	BVCQ05	<.25	1
VCQ35	4	BVCQ32	3 (5)	3
VCQ29	4 (1)	BVCQ27	1	1

<i>VCQ Item</i>	<i>VCQ loading</i>	<i>BVCQ item</i>	<i>BVCQ 5-factor</i>	<i>BVCQ 3-factors</i>
VCQ24	5-	BVCQ22	1	1
VCQ48	5-	BVCQ44	1	1
VCQ22	5-	BVCQ20	2	2
VCQ30	5-	BVCQ28	2	2
VCQ15	5-	BVCQ14	3	3
VCQ42	5-	BVCQ39	3	3
VCQ14	5-	BVCQ13	<.25	n.l.
VCQ50	5-	BVCQ46	<.25	1
VCQ58	5-	BVCQ53	<.25	3
VCQ64	5-	BVCQ57	2 (3)	3 (2)
VCQ10	5-	BVCQ10	not incl.	not incl.
VCQ54	5-	BVCQ50	not incl.	not incl.
VCQ26	5- (3-)	BVCQ24	3	3
VCQ59	5- (3-)	BVCQ54	<.25	1

Appendix IV

BVCQ3 Factor Analysis: Questions 1-66

- 412 subjects
- 67 items (questions 1 to 66 – n.56 excluded)

Reliability Analyses:

- alpha reliability for the scale was good : .91
- the following items were excluded on the basis of low reliability (item-total correlation <.25) :

item

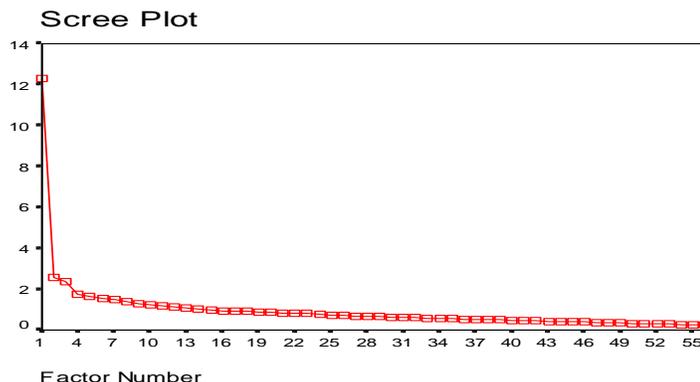
3	0.0294	3. I enjoy life's pleasures.
7	0.1972	7. I act with a firm sense of duty toward my family
10	0.1876	10. I often lead others toward a common goal.
33	0.2488	33. I don't take on things others feel are beyond my capability.
35	0.1816	35. I develop and maintain strong beliefs.
48	0.1551	48. I am in control of my own destiny.
50	0.235	50. I take responsibility for important decisions affecting others.
51	-0.1564	51. I can will my mind to perform at a high level when needed.
66	0.0527	66. To accomplish a goal, I can will myself to do things that I would rather not do.

- item n.3 has been known to be problematic before

- low item-total corrs. for items 7; (10?); 35; 48; (50?) – may be due to cultural differences
- items n. 15 & 17 were kept even if they showed item-total corr. of between .25 and .3

The factor analysis was therefore conducted on a sample of 412 subjects with 58 items.

Scree Plot



- On the basis of the scree plot (above), a 3 factor solution seemed the strongest – possibly looking at a 4- and 5- too for comparison reasons.

Factor Correlation Matrices:

3- factor:

Factor Correlation Matrix

Factor	1	2	3
1			
2	.265		
3	.506	.210	

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

4- factor

Factor Correlation Matrix

Factor	1	2	3	4
1				
2	.266			
3	.340	.274		
4	.454	.251	.392	

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

5-factor

Factor Correlation Matrix

Factor	1	2	3	4	5
1					
2	.272				
3	.287	.262			

4		.351	.188	.261	
5		.361	.246	.360	.284

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

3 Factor Solution of Questions 1-66 - Pattern Matrix:

Factor 1

BVCQ62	0.625	62. I do not deal effectively with psychological fear.
BVCQ34	0.609	34. I have little persistence
BVCQ19	0.606	19. I do not cope well with stress.
BVCQ59	0.585	59. I have difficulty eliminating bad (rather than "unwanted") habits.
BVCQ16	0.572	16. I am not good at avoiding temptation which come to me .
BVCQ61	0.540	61. I rarely win games with competitive partners.
BVCQ41	0.527	41. I have difficulty overcoming adversity.
BVCQ30	0.524	30. My opinions often change
BVCQ42	0.524	42. I find it hard to relax mentally.
BVCQ49	0.489	49. I do not deal effectively when fearful for my physical well being.
BVCQ23	0.483	23. I often have a hard time having my views taken seriously by others.
BVCQ22	0.465	22. I rarely take the initiative.
BVCQ38	0.463	38. I often let things in my life get out of control.
BVCQ18	0.456	18. I find it hard to resist negative influences to myself .
BVCQ55	0.429	55. I have little influence on others' values and beliefs (new trans. Used "kurang."
BVCQ47	0.424	47. I find it difficult to keep trying as long as necessary.
BVCQ65	0.424	65. I am impatient.
BVCQ44	0.419	44. I find it hard to make decisions, even if they are minor ones.
BVCQ08	0.400	8. I find it difficult to stick to my decisions
BVCQ27	0.400	27. I have little self-discipline
BVCQ46	0.378	46. I find taking responsibility difficult when in a group.
BVCQ04	0.360	4. I find it hard to help others deal effectively with stress
BVCQ54	0.331	54. I have difficulty maintaining self-esteem (left out "high.")
BVCQ37	0.322	37. I am not very good at helping others solve their problems.
BVCQ05	0.313	5. I find it difficult to avoid harmful and bad habits in myself
BVCQ52	-0.444	52. I readily become absorbed in my own thoughts

Factor 2

BVCQ20	0.507	20. I am good at influencing others' course of action.
BVCQ28	0.497	28. I can influence my close friends when appropriate.
BVCQ63	0.468	63. I am good at helping others develop mentally.
BVCQ15	0.433	15. Others rarely ask my advice when they are in a difficult situation.
BVCQ45	0.430	45. I am good at helping others recognize stress.
BVCQ26	0.424	26. I am good at helping others avoid stress. (changed from neg to pos)
BVCQ31	0.375	31. I am good at making other people happy.

Factor 3

BVCQ39	0.506	39. I find it easy to improve myself.
BVCQ21	0.501	21. I am in control of my habits.
BVCQ32	0.490	32. I am generally free of unwanted habits
BVCQ64	0.471	64. I _am able to change my mind when appropriate.
BVCQ24	0.457	24. I am generally self-confident.
BVCQ40	0.444	40. I can focus all my attention on one thing.
BVCQ14	0.425	14. I am generally full of energy and vitality.
BVCQ02	0.425	2. I have strong determination
BVCQ29	0.419	29. I act with a firm sense of duty to society.
BVCQ36	0.407	36. I consider myself a lucky person.
BVCQ60	0.397	60. I have a good memory.
BVCQ58	0.384	58. I am good at controlling my emotions.
BVCQ57	0.378	57. I can be dominant when appropriate.
BVCQ17	0.371	17. I generally choose the right time to take action.
BVCQ43	0.370	43. I am good at helping others learn.
BVCQ25	0.364	25. I keep myself in good physical shape.

BVCQ53 0.304 53.I find it easy to make things in my immediate physical world happen as I would like.

5-Factor Solution of Questions 1-66

Factor 1

BVCQ22	0.568	22. I rarely take the initiative.
BVCQ61	0.480	61. I rarely win games with competitive partners.
BVCQ30	0.479	30.My opinions often change
BVCQ34	0.468	34.I have little persistence
BVCQ08	0.421	8. I find it difficult to stick to my decisions
BVCQ55	0.396	55. I have little influence on others' values and beliefs
BVCQ23	0.389	23.I often have a hard time having my views taken seriously by others.
BVCQ44	0.351	44. I find it hard to make decisions, even if they are minor ones.
BVCQ27	0.300	27. I have little self-discipline
BVCQ52	-0.337	52. I readily become absorbed in my own thoughts

Factor 2

BVCQ63	0.540	63.I am good at helping others develop mentally.
BVCQ20	0.510	20. I am good at influencing others' course of action.
BVCQ28	0.508	28. I can influence my close friends when appropriate.
BVCQ45	0.504	45.I am good at helping others recognize stress.
BVCQ26	0.477	26.I am good at helping others avoid stress. (changed from neg to pos)
BVCQ15	0.442	15. Others rarely ask my advice when they are in a difficult situation.
BVCQ31	0.406	31. I am good at making other people happy.
BVCQ57	0.379	57. I can be dominant when appropriate.
BVCQ37	0.354	37.I am not very good at helping others solve their problems.
BVCQ43	0.347	43. I am good at helping others learn.

Factor 3

BVCQ64	0.508	64.I am able to change my mind when appropriate.
BVCQ21	0.473	21. I am in control of my habits.
BVCQ39	0.465	39.I find it easy to improve myself.
BVCQ24	0.458	24.I am generally self-confident.
BVCQ29	0.414	29. I act with a firm sense of duty to society.
BVCQ40	0.392	40.I can focus all my attention on one thing.
BVCQ17	0.387	17. I generally choose the right time to take action.
BVCQ02	0.380	2. I have strong determination
BVCQ14	0.364	14. I am generally full of energy and vitality.
BVCQ58	0.362	58. I am good at controlling my emotions.
BVCQ32	0.353	32.I am generally free of unwanted habits
BVCQ25	0.340	25. I keep myself in good physical shape.
BVCQ60	0.339	60. I have a good memory.
BVCQ36	0.317	36. I consider myself a lucky person.

Factor 4

BVCQ65	0.494	65.I am impatient.
BVCQ62	0.460	62. I do not deal effectively with psychological fear.
BVCQ49	0.444	49. I do not deal effectively when fearful for my physical well being.
BVCQ59	0.440	59.I have difficulty eliminating bad (rather than "unwanted") habits.
BVCQ19	0.420	19. I do not cope well with stress.
BVCQ42	0.401	42. I find it hard to relax mentally.
BVCQ38	0.367	38.I often let things in my life get out of control.

Factor 5

BVCQ09	0.542	9. I find it hard to relax physically
BVCQ18	0.443	18. I find it hard to resist negative influences _to myself_.
BVCQ12	0.366	12. I rarely become absorbed in what I am doing.
BVCQ01	0.347	1. I am not good at organizing my daily activities
BVCQ16	0.322	16. I am not good at avoiding temptation _which come to me_.
BVCQ11	0.317	11. I often yield to temptations which get in the way of pursuing a future goal.

Appendix IV

Balinese Participant Information Form (BPIF3)**Percent responses, based on 533 participants**

Questions about Dreams and the Psychic

- How often do you dream while you are asleep?

4%	15%	30%	19%	31%	
Never		Once a week			Almost everyday
- How often do you clearly recall the contents of your dreams?

43%	14%	7%	15%	22%	
Never		Once a week			Almost everyday
- To what degree do your dreams differ from your ordinary experience?

12%	8%	22%	12%	46%	
Not at all					Very much
- Have you ever had a dream in which you were aware you were dreaming?

36%	29%	16%	14%	6%	
Never		Once a week			Almost everyday
- How do you understand the meaning of your dreams? (Tick as many boxes as appropriate or add other perceptions about dreams).

% OF 533 PARTICIPANTS

 - 57% dream is just the flower of sleep
 - 27% dream is a communication with the spirit of another person
 - 38% dream is advice or direction from God
 - 48% dream is the forecasting of what is going to happen
 - 7% dream is an education process with God
 - 6% _____
- Have you ever had a dream that is a result of a communication with another person through spirit communication? (for example, in your dream you meet a grandmother, and then actively in the dream at the same time the grandmother has an accident.)

48%	10%	32%	5%	4%	
Never		Once a week			Almost everyday

7. Have you ever dreamed where you had guidance from God?
41% Never **11%** **32%** Once a week **8%** **7%** Almost everyday
8. Have you ever received in a dream a prediction of an event that is supposed to happen?
26% Never **10%** **38%** Once a week **12%** **13%** Almost everyday
9. Have you ever received in a dream a learning process with God?
53% Never **10%** **29%** Once a week **6%** **3%** Almost everyday
10. How often do you daydream? (please tick one box)
57% Rarely **17%** **21%** Daily **4%** **1%** Hourly
11. How easy is it for you to create a mental image of a familiar scene? (please tick one box)
32% Impossible **9%** **19%** **14%** **27%** Effortless
12. Have you ever practised any form of mental discipline/exercise, e.g., meditation, biofeedback, hypnosis, relaxation exercises? Meditation? Yoga? **34%** Yes **66%** No
- If yes, what kind: Meditation-**57%**; yoga-**4%**; biofeedback-**1%**; relaxation-**17%**;Hynosis-**1%**
- 5 If yes, did you practice consistently or sporadically?
21% Consistently **78%** Sporadically
- If yes, do you still practice: (please tick one box)
24% Never **28%** **22%** Weekly **9%** **16%** Daily
13. What do you understand by Extra Sensory Perception (ESP) or the sixth sense or *betel-tingal*?
% of 533 participants
40% see something without using vision
25% hear something without the usual hearing
22% understand things automatically
0% doing something that can't be accomplished by normal thinking
3% _____
14. What best describes your own psi ability or supernatural or *betel-tingal*?
8% I have psi ability **6%** **32%** Uncertain **8%** **46%** I have no psi ability
15. Is the existence of ESP or sixth sense or *betel-tingal* there?
61% Certain **17%** **17%** Uncertain **2%** **3%** Impossible
16. Have you ever had an experience which is best explained by *betel-tingal*, ESP or sixth sense?

16% 7% 15% 6% 56%
 Yes Uncertain No

. If you have had an ESP experience(s), was the ESP information conveyed to you primarily (most commonly) by means of: (tick as many boxes as appropriate)

% of 402 total responses

63% A sense, feeling, intuition, or thought
17% Seeing a vision of a figure or an object
20% Internal mental imagery

% of 177 total responses

. If the experience consisted primarily of internal mental imagery, was the nature of the experience primarily: (tick as many boxes as appropriate)

21% Visual
20% Auditory
13% Olfactory (a sense of smell/odour)
46% Kinaesthetic (a physical sensation)
0% Other (please specify): _____

17. Does everyone have the sixth sense ability?

11% 8% 29% 4% 48%
 Yes Uncertain No

18. When playing a game of chance, do you feel that you can influence the roll of the dice, or the way the cards are distributed in order to have more success in the game?

7% 4% 29% 6% 55%
 Yes Uncertain No

19. Do you believe that through black magic one can harm another person?

66% 8% 16% 1% 9%
 Yes Uncertain No

20. Have you ever seen what you believe is a leyak?

12% 6% 13% 3% 66%
 Yes Uncertain No

21. Have you personally witnessed an event such as a person knowing through sixth sense what is taking place in a distance place while it is occurring?

21% 7% 10% 4% 55%
 Yes Uncertain No

22. Have you personally witnessed an event such as a person finding a lost object only through the sixth sense?

20% 6% 9% 3% 63%
 Yes Uncertain No

23. Have you personally witnessed a person moving an object in front of your eyes through paranormal ability?

21% 5% 7% 4% 63%
 Yes Uncertain No

24. Is the existence of inner power (PK or inner power):

- | | | | | | | |
|--|------------|------------|------------|-----------|-----------|----|
| | 65% | 10% | 16% | 3% | 6% | |
| | Yes | | Uncertain | | | No |
25. Have you ever had an experience which is best explained by PK or inner power?
- | | | | | | | |
|--|------------|-----------|-----------|-----------|------------|----|
| | 12% | 4% | 7% | 3% | 74% | |
| | Yes | | Uncertain | | | No |
26. Has any member of your family had psychic or supernatural or sixth sense paranormal experiences?
- | | | | | | | |
|--|------------|-----------|-----------|-----------|------------|----|
| | 14% | 3% | 9% | 2% | 72% | |
| | Yes | | Uncertain | | | No |
27. Have you ever experienced a vision which others did not see for which you could find no normal explanation?
- | | | | | | | |
|--|------------|-----------|-----------|-----------|------------|----|
| | 12% | 2% | 6% | 3% | 76% | |
| | Yes | | Uncertain | | | No |
28. Have you ever experienced an auditory experience which others did not hear for which you could find no normal explanation?
- | | | | | | | |
|--|-----------|-----------|-----------|-----------|------------|----|
| | 9% | 2% | 6% | 4% | 79% | |
| | Yes | | Uncertain | | | No |
29. Have you ever had an experience in which you felt as if your consciousness was separated from your physical body? (please tick one box)
- | | | | | | | |
|--|------------|-----------|-----------|-----------|------------|----|
| | 11% | 2% | 9% | 2% | 79% | |
| | Yes | | Uncertain | | | No |
30. When did you have this condition from above
- % of 533 participants**
- 46%** during sleep
 - 5%** during waking
 - 18%** during meditation or relaxation
-
31. Do you think that you might be able to be successful in a controlled laboratory experiment? (please tick one box)
- | | | | | | | |
|--|------------|-----------|------------|-----------|------------|----|
| | 11% | 4% | 34% | 5% | 45% | |
| | Yes | | Uncertain | | | No |
32. According to you what causes a person to possess sixth sense/ psychic/ supernatural/ ESP/ paranormal abilities? (select one or more or add if you think it is necessary).
- % of 533 participants**
- 17%** descent
 - 26%** choice of God
 - 23%** trance/being sat on by power/possessed
 - 2%** mental disorder
 - 29%** learning a specific method or technique
 - 2%** mention others
33. According to your understanding, how should practice [or what means, or what is the way] to develop the sixth sense? (select one or more or add if you think it is necessary)
- % of 533**
- 5%** through the betel leaf?
 - 17%** through the thumb nail
 - 25%** through dream

47% through trance

6% _____

34. According to your experience and training or other methods, what can you do to develop the sixth sense?

% of 533 participants

57% meditation

38% yoga

19% fasting

47% praying

35. Do a fighting spirit, or high motivation, or fighting without giving up have a connection to developing one's sixth sense?

27%	12%	36%	5%	20%	
Yes		Uncertain			No

36. What do you think are the factors that create a fighting spirit, or high motivation, or fighting without giving up?

% of 533 participants

24% one is affected by his life in the mother's womb

11% one is affected by how he is born

41% one is affected by the education he receives

34% one is affected by a pattern of upbringing

28% one is affected by childhood experiences

69% one is affected by experience in one's whole life

37. Is it possible to be taught a fighting spirit, or high motivation, or fighting without giving up when we are adults?

55%	13%	20%	2%	10%	
Yes		Uncertain			No