RESEARCH

An Exploration of Degree of Meditation Attainment in Relation to Psychic Awareness with Tibetan Buddhists

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Abstract—Many traditional Mahayana, and modern Tibetan, Buddhist texts relate meditation attainment to psychic ability. This teaching served as the hypothesis—that more advanced meditators would choose a psi target correctly, significantly more often than beginners.

A basic free-response design was used in which a computer programme (PreCOG) chose a target picture at random from a 4-picture set. There were 25 sets, all pictures of Tibet. PreCOG guided the participants through the procedure, in which they aimed to become aware of the target. 18 participants, Tibetan monks, nuns and Western Buddhist meditators, completed 8 sessions each. Half the sessions used a clairvoyance, and half a precognition, protocol.

Age and years of meditation practice correlated significantly with the psi scores (Pearson $r = 0.52$, $p < 0.05$). This suggests that, as one practices meditation, psychic awareness begins to manifest more reliably. This result was confounded by a non-significant psi-missing trend. There was no significant difference between the clairvoyance and precognition trials (t-diff (142) = 0.800). There was, however, significant psi-missing from the group of Rinpoches ($t = -2.09$, 2tail $p < 0.05$). The three participants who scored most strongly in the psi-missing direction all reported childhood memories of previous lives as monks in Tibet.

Keywords: psychic awareness—Tibetan Buddhists—meditation

Introduction

In the 1970's there was interest in researching meditation as a psi-conducive state (Schmeidler, 1994), partly as a result of the teachings of Patanjali in which

he states that psychic abilities manifest on attainment of Samadhi (Honorton, 1977). An opportunity for research in an ashram in India with advanced Yogis and students enabled this research to be extended to explore whether or not years of meditation and Yoga practice are in fact related to increasing psi awareness (Roney-Dougal & Solfvin, 2006).

There are two possible interpretations of Patanjali's sutras. The first, on which previous research has been based, is that as one practices meditation so, bit by bit, one's psychic awareness begins to manifest. The other is that it is only once Samadhi has been obtained that the psychic abilities manifest reliably. Two studies were run in the ashram and the data left this matter unresolved. Whilst overall the results were non-significant, selected data from the first study did show a significant difference between the advanced meditators and the student beginners. This was not replicated in the second study. What did show from that second study was that the significant difference between the beginners and advanced in the previous study was primarily due to a psi-missing tendency of the students. In the second study there was no psi-missing tendency in this group and no significant difference between the groups. However, in both studies the advanced meditators scored consistently in the psi-hitting direction with an overall 33% direct hit rate which, if research had continued, may well have resulted in a cumulative deviation from chance (Jahn et al., 1997).

The results therefore, suggested that this line of research is one that is unresolved and worth following, and it was decided to extend this meditation research to Tibetan Buddhists, who have an extensive tradition of psi being used by advanced meditators. The initial visit in 2005 was devoted primarily to a preliminary overview of Tibet's psychic traditions (Roney-Dougal, 2006), in order to give a ground base for the present study.

In Buddhism there are two meditation disciplines: the shamatha discipline of one-pointed concentration and the vipassana discipline of contemplative insight. Developing shamatha (calm-abiding or mental quiescence) is considered to be an essential first step. Many traditional Mahayana and modern Tibetan Buddhist texts (e.g. Conze, 1975; Lamrimpa, 1995, p. 63; Tsong Khapa, 2002) relate meditation attainment to development of psychic powers, as do Yogic teachings. The meditation technique that the Buddhist texts recommend is one-pointed concentration, this again being similar to the Yogic teachings.

However, there appear to be different opinions with regard to precisely when the clairvoyant ability manifests (Khensur Lobsang & Khangser Rinpoche, personal communication, May 8th, 2006). In Tsong Khapa, the primary Gelugpa exponent, psychic ability is called the superknowledges and is related to meditative stabilization:

In particular, train well in meditative stabilization—the heart of meditative serenity—in order to make your mind capable of being set on a virtuous object of meditation according to your wish. [93] The Elder's *Lamp for the Path to Enlightenment* says that you should develop meditative serenity for the sake of producing the superknowledges. (Tsong Khapa, 2002, Vol. 1, p. 136).

And later:

However, on the basis of meditative stabilization you also achieve the five kinds of superknowledge, but I shall not discuss them due to fear of verbosity. (Tsong Khapa, 2002, Vol. 2, p. 100).

Here, the attainment of clairvoyance is equated with attainment of meditative stabilization.

But in Lodro (1998), a modern Gelugpa scholar, it is equated with calm-abiding:

What do non-Buddhists have? They have attainment of calm abiding and of the first five of the six clairvoyances. It is impossible to attain the first five clairvoyances without having attained an actual absorption of a concentration; the first five clairvoyances and the four immeasurables must be attained in dependence on an actual concentration. Without dependence on an actual concentration, no person—whether Buddhist, non-Buddhist, Bodhisattva, or whatever—can attain any of the first five clairvoyances. (Lodro, 1998, p. 226).

Also it seems that this clairvoyance is more akin to what in the West we would more closely define as omniscience, rather than the clairvoyance we research in parapsychology. The Buddhist clairvoyance includes what we consider miraculous powers:

It is usually said that a yogic practitioner who has attained calm abiding can fly, and so forth. Some scholars say that someone who attains calm abiding can pass unimpededly through a wall, and there are many accounts of such occurrences. (Lodro, 1998, p. 117).

Khangser Rinpoche (personal communication, 8th May, 2006) says that first one attains Samadhi, by practising shamatha and obtaining stabilisation in this, i.e. having attained the 9th stage. There are said to be 9 abilities you reach at different stages of meditation. Then one practises vipassana and attains perfection in special insight, and then one has to overcome the five sensory attachments of the desire realm. Only then do you attain to the high form of clairvoyance.

Tibetans separate two types of "clairvoyance." They consider that the one Western parapsychologists research is a low-level ability that is unreliable and subject to fraud. Many people are considered to have this ability and Tibetans consider that it is an inherent ability resulting from past life karma, which could, however, benefit from training by meditation. The clairvoyance you attain after reaching Samadhi is a high level ability which is reliable.

In interviews with various monks, it was stressed over and over again that only a few people attain Samadhi and clairvoyant abilities, and even then the clairvoyance is no more than 80% reliable. Omniscience arises only with full enlightenment. Not everyone who practices meditation will attain Samadhi, so not everyone who practices meditation will become psychic. In other words:

- There is a genius for enlightenment.
- There is a genius for meditation.
- There is a genius for psychic awareness.

We can all learn anything but not everyone has a talent. Only a few have genius.

However, there are still the two possibilities which were outlined in the ashram research. Either this reliable clairvoyance manifests only after one has attained Samadhi and there is no sign of it before then. Or, as one develops in one's meditation, so signs of reliable clairvoyance begin to manifest. If that is the case, then comparing beginners with advanced meditators could well show a difference in scoring on a receptive psi task.

Therefore in this experiment we repeated the preliminary ashram research using a formal design, working with beginners and advanced meditators, to see if there were any signs of increasing psi ability with increasing meditation practice.

Hypothesis

In a population of Tibetan Buddhist meditators, participants' degree of meditative attainment (duration and forms) as assessed by the Meditative Attainment Questionnaire (MAQ) will correlate positively with psi scoring, such that the more advanced meditators will choose the target correctly significantly more often than the beginners.

Method

Design

A free-response design was used in which all participants were required to complete 8 sessions: 4 clairvoyance and 4 precognition. A computer programme (PreCOG) chose a target set at random from a pool of 25 sets, and a target picture at random from a 4-picture pool. The participant aimed to accurately perceive this target picture before feedback from the computer. PreCOG was used so that the sessions could be run without any assistants, enabling Serena Roney-Dougal to work with the participants at any time that was mutually convenient for them and under whatever conditions there might be. As the target was chosen by the computer, this clairvoyance/precognition design has both a randomised double-blind design and inbuilt fraud control, so there is no need for specially designed rooms, multiple linked-up computers or any of the other laboratory facilities. Therefore it is ideal for research "in the field." It is also a suitable method to use with Tibetan people who have a tradition of precognition (oracles and Mo divination) being used by the lamas in their monasteries, as well as the use of clairvoyance for discovering tulkus[1], etc. They are therefore very open to the possibility of precognition and clairvoyance. For further details of these beliefs and practices see Roney-Dougal (2006).

Materials

The precognition computer programme (PreCOG), originally developed for this field research in India by Jezz Fox for an Apple Macintosh G4 Powerbook, was further developed for this study. Custom written software (preCOG) was

developed for the presentation of the materials and recording of data. The software was written using RealBasic (www.realbasic.com) and compiled for use on an Apple Macintosh computer running OS 9. The software guided the researcher and participant through the procedure, beginning with a data entry screen to enter trial and participant details, to the preparation and trial periods, and ending with the rating and feedback stages.

A configuration file allowed specifics of the design to be set including: 1) the number of trials each participant would take part in; and 2) the point in the procedure at which the target would be selected (before the trial period for a clairvoyance protocol, after the trial period for a precognition protocol, or randomly before and after). The random selection was used in this study; for half of the trials for each participant the target was selected before the trial period and for the other half the target was selected after the trial period. The order of selection was randomised and neither the participant nor the experimenter was aware of whether a clairvoyance or precognition trial had been selected. preCOG determined whether the trial would be a clairvoyance trial or precognition trial following the entering of trial and participant details.

There were 25 target sets, which were static pictorials adapted to be appropriate for Tibetan monks, comprising pictures of Tibet. Target selection was a 2-stage process, firstly a selection of the judging set was made, such that the participant never received the same set more than once, then a selection of the target from within the judging set was made.

For the judging/rating stage preCOG displayed the 4 items in the judging set one at a time on the screen at their full size. When all 4 had been viewed they were displayed simultaneously on the screen at half of their full size for rating on a scale of 0 to 100 with the restriction of each item having to be awarded a unique rating. Following the ratings the data were recorded to disk before providing feedback to the participant by displaying the target for the session. All the randomisation was performed using pseudo-random algorithms.

The participant's mentation was recorded throughout the session, which permits qualitative analysis as well as the more customary quantitative statistical analyses.

A Meditation Attainment Questionnaire (MAQ) was designed with help from David Luke (see Appendix 1). This questionnaire assessed the number of years the participants had practised different disciplines, such as physical asanas, breathing techniques (pranayama), and meditation, including the different types of meditation practise the person had done. It also assessed the preliminary practices (ngondros), which all monks must complete prior to starting meditation practices and which are normally done in a retreat situation. This enabled the amount of meditation practice to be clearly specified, each participant estimating the number of hours per day or week that they practised the various techniques, as well as specifying the number of years for which they have practised them. In addition they stated whether or not they were practising regularly at the time of doing the research. The degree to which years of practice is actually related to

meditation attainment is uncertain, but this does at least give a quantifiable measure which may bear some relation to attainment.

Participants

The study included any Tibetan monks, nuns, lamas,[2] or Western Buddhist students who wanted to participate. There were a total of 24 participants, but 6 dropped out having completed only 1–4 sessions. In the preliminary study (Roney-Dougal & Solfvin, 2006) it was found that those who completed only a few sessions gave highly variable and inconsistent scoring. Therefore, in this study it was pre-designated that only those who completed 8 sessions would be retained for analysis. Thus there were a total of 18 participants who completed the required 8 sessions, comprising 6 Western students, 1 Western nun, 1 Nyingma lama, 1 Kagyu Rinpoche (Rinpoche is the formal title of a tulku), two Gelugpa Rinpoches, 1 Gelugpa Khensur (a Khensur is an ex-abbot of a monastery), and 6 Gelugpa Geshes (a monk who has a degree equivalent to a PhD in Buddhist philosophy). Nyingma, Kagyu, and Gelugpa are 3 sects within Tibetan Buddhism. They all have different training in meditation. This permitted a wide spread of degree of meditation attainment to be assessed and a sufficiently wide number of different participants to check on the suitability of the methodology, target sets, questionnaire, etc.

Sampling was conducted by personal visits to Tibetan Buddhist monasteries, monastic universities, and meditation centres in India. The director (in monasteries and universities this was the monastic abbot) was contacted, the project described, permission formally requested, and assistance solicited in locating potential participants. A personal meeting with potential participants was arranged, with a translator if necessary. The project was described in detail and an invitation to participate was made. Any candidate who volunteered was included in the study. Sessions were run in Dharamsala, Bylakuppe, and Ladakh during 2005–2006. It took more than 1 year to recruit and work with the 18 participants.

Procedure

The procedure for each session was the same. The same time-of-day and location was used, wherever possible, for each session with a given participant. Sessions were kept approximately equally spaced in time, and done daily wherever possible. On arrival for the first session the participant was fully informed of the protocol and what was expected of them. The procedure was recorded on the computer in English and on to tape in Tibetan, which guided the participant through the session. This procedure was also written in Tibetan for the participant to refer to if needed (see Appendix 2).

There was a 5-minute relaxation period, a resolution statement of intent, followed by a 15-minute meditation practice. At the end of this there was a

4-minute awareness period in which they were instructed to allow their mind to go blank and allow any target related experience to occur.

On completion of the awareness period the participant verbally described and drew out their awareness experience relating to the target. They then saw all 4 pictures, viewing them 1 by 1 on the large screen size, starting with picture A. They were free to view the pictures as many times as they wished. After they viewed all 4 they rated them on a 1–100 point rating scale, according to the degree of confidence with which they considered the picture to be the target. The computer then showed them the actual target picture. This self-judging method is in line with Tibetan practice.

After they had completed all 8 sessions, they completed the MAQ and a short interview asking them about their previous experience of, and belief in, psychic abilities, as well as various aspects of the present study.

Results

The unit of analysis for the psi scoring (free-response test) was the individual participant's rating of the target for the session. This is operationalised by a z-score relative to the mean and standard deviation of all ratings assigned in the trial. A z-score for each trial was formed using the formula:

$$z = \frac{\text{Target rating} - \text{Mean of trial ratings}}{\text{SD of trial ratings}}$$

Where:

Target rating = the rating (1–100) assigned in the session to the actual target
Mean of trial ratings = average of all 4 ratings assigned to trial pool
SD of trial ratings = standard deviation of all 4 ratings assigned to trial pool
This z-score is designated as TrDev.

The primary goal of the current study is *not* to find evidence for psi but rather to test the hypothesis that psi scoring is enhanced by meditative practices. The hypothesis was tested by averaging participants' session scores (TrDev) and correlating these with their MAQ item scores. Pearson correlations were used and tested for significance with t-tests. To achieve this, the TrDev scores assigned to each trial above were collapsed as follows. Each participant was given:

1) an average TrDev score for their 4 clairvoyant trials;
2) an average TrDev score for their 4 precognitive trials; and
3) and average TrDev score for their entire 8 trials.

These TrDev scores were then correlated with the relevant study variables as shown in Table 1.

In Table 1, we see that overall scoring (clairvoyant and precognitive trials together) was significantly correlated at $p < 0.05$ with age, years of practice, and years of meditation. Participants who are older, and have practiced and

TABLE 1
Pearson Correlations between TrDev Scores and Other Variables

Variable	TrDev-clair	TrDev-precog	TrDev-All
TrDev-clair	1.000	−0.241	0.746***
TrDev-precog	−0.241	1.000	0.466*
Age	0.493*	0.112	0.526*
Years practice	0.356	0.284	0.520*
Meditation years	0.357	0.285	0.521*
Asana hours	−0.154	0.173	−0.021
Prana hours	0.132	−0.044	0.093
Meditation hours	0.344	−0.015	0.314
Retreat hours	−0.266	−0.165	−0.356
Total hours	0.254	−0.014	0.222

Note: n = 18 for all correlations.
*p < 0.05.
**p < 0.01.
***p < 0.001 (all 2-tailed tests).

meditated for longer, tended to give higher ratings to the targets. This appeared to confirm the main hypothesis of this study on 2 counts, years of practice and years of meditation. Closer inspection of the raw data showed that these 2 variables are essentially identical with all but 1 participant giving the same answer to both questions (r = 0.999), and that age is highly correlated with both of them (r = 0.718 and r = 0.717). Thus, age confounds the correlations between psi score (TrDev) and years of practice and years of meditation.

In an attempt to untangle this confound between predictor variables age and years of meditation practice, the student and monk groups were separated and the correlations reassessed as shown in Table 2.

Table 2 suggests that the correlations of TrDev with age and with years of meditation were due entirely to the monk group. Thus, the multiple correlations (R^2) of these two predictors individually and in combination were examined solely for the monks as seen in Table 3.

Table 3 suggests that years of meditation practice accounts for a larger (not significantly) proportion of the explained variance. Moreover, adding age to the regression, the net increase in R^2 was quite small, whereas starting with age as

TABLE 2
Simple Correlations of TrDev with Age, and Years Meditation by Group

Variable	Group		
	Students	Monks	All
Age	0.378	0.652*	0.526*
Meditation	−0.256	0.748**	0.520*

*p < 0.05.
**p < 0.01 (2-tailed).

TABLE 3
Multiple Correlations of TrDev for Monks with Age and Years Meditation

Predictors	Multiple correlation (R^2)
Years meditation	0.560**
Age	0.426*
Both	0.574*

*$p < 0.05$.
**$p < 0.001$ (2-tailed).

the sole predictor and then adding years of meditation to the regression produced a more substantial (not significant) increase in the prediction. Thus, while this confound cannot be settled absolutely with these data alone, these additional analyses shed some light on the issue.

The graph (Figure 1) shows the scatter plots for the correlations of psi with years of meditation, for the monk group. Note that a fitted line for the monks would be positive (+ slope). Also note that the 1 monk with over 30 years meditation also has the highest TrDev score. This could be an "outlier." However, even without that data point, the best fit line is still fairly strong and positive. Of course, the negative TrDev scores, which are important for these correlations, are problematic interpretationally, so that if we were to use the absolute values of TrDev scores, the correlations here would disappear.

It is therefore concluded that, as hypothesized, years of meditation practice may be a statistically significant predictor of psi target rating. And while a confound with age is possible, and not entirely decipherable with these data
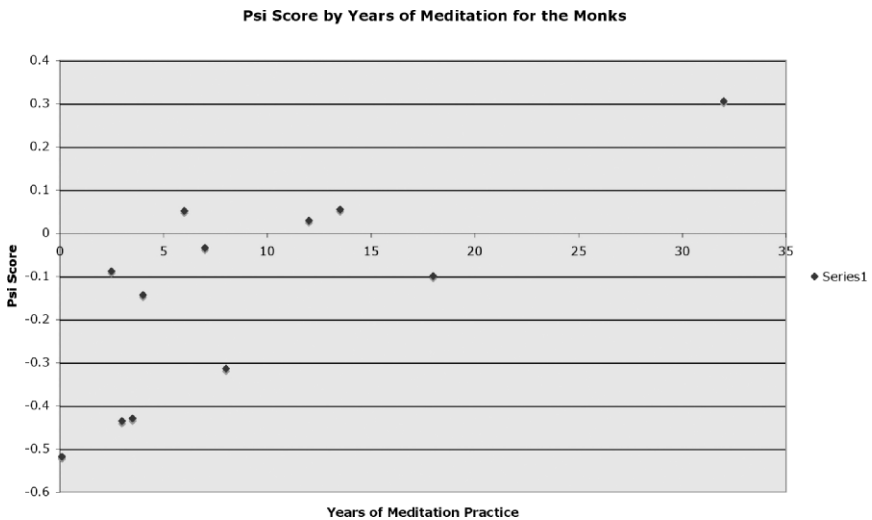

Fig. 1. Psi score by years of meditation for monks.

TABLE 4
Mean Target Rating Scores (TrDev) by Condition (Clairvoyant, Precognitive) by Group

Group (n)	Statistic	Session type		All sessions
		Clairvoyant	Precognitive	
Students (6)	TrDev	0.009	−0.094	−0.042
	SD	0.828	0.842	0.828
	n	24	24	48
	ES(r)	0.01	−0.11	−0.05
Monks (12)	TrDev	−0.136	−0.137	−0.137
	SD	0.879	0.763	−0.819
	n	48	48	96
	ES(r)	−0.15	−0.18	−0.17
All (18)	TrDev	−0.088	−0.123	−0.105
	SD	0.860	0.784	0.820
	n	72	72	144
	ES(r)	−0.10	−0.16	−0.13

only, additional multiple regression analyses strongly (though not significantly) suggest that years of meditation practice is the primary predictor variable. Thus, this hypothesis is at least provisionally confirmed, though confused by the psi-missing.

Subject Centred Analyses

This design, of each participant doing multiple trials, enabled an exploration of possible differences between individuals who were more advanced in their spiritual practice as reflected in their community status. So first let us look at the psi scoring of the different groups, as shown in Table 4.

A positive score indicates that the target was rated higher than average among the stimuli, the psi-hitting direction. A negative score indicates a lower than average rating was assigned to the actual target, the psi-missing direction. Chance expectation of the TrDev score is zero. These scores are tested against chance expectation using a single mean t-test. There was a non-significant trend in this study towards psi-missing (TrDev $= -0.105$). The table shows that negative TrDev mean values predominate in the subgroupings.

Overall, scoring on clairvoyant trials was at chance levels (TrDev $= -0.088$, SD $= 0.860$, t(71) $= 0.867$, 2-tail p $= 0.389$) with a slight tendency towards psi-missing on the precognitive trials (TrDev $= -0.123$, SD $= 0.784$, t(71) $= -1.327$, 2-tail p $= 0.189$). As there was no significant difference between the clairvoyance and precognition trials (t-diff (142) $= 0.800$, 2-tail p $= 0.425$), the clairvoyant vs. precognitive trial breakdown was eliminated from all further analyses.

Half of the student group and two-thirds of the monk group showed negative average TrDev scores, rating the targets *lower* than the decoys in the target pool. As these participants were unaware which target pool materials were the actual

TABLE 5
Mean Target Rating Scores (TrDev) for Participants

Participant	M	SD	t-test	Effect size (r)
STUDENTS				
1	0.188	0.931	0.57	0.21
2	−0.344	0.840	−1.16	−0.40
3	−0.024	0.880	−0.08	−0.03
4	0.062	0.899	0.20	0.08
5	0.014	0.838	0.05	0.02
6	−0.151	0.742	−0.57	−0.21
MONKS				
Nun	−0.099	0.947	−0.30	−0.11
Geshe 1	−0.164	1.062	−0.44	−0.16
Geshe 2	−0.518	0.479	−3.06*	−0.76
Geshe 3	−0.315	0.806	−1.10	−0.38
Geshe 4	0.052	0.875	0.17	0.06
Geshe 5	0.029	0.891	0.09	0.03
Geshe 6	0.055	0.762	0.20	0.08
Rinpoche 1	−0.436	0.847	−1.46	−0.48
Rinpoche 2	−0.088	0.794	−0.31	−0.12
Rinpoche 3	−0.429	0.617	−1.97**	−0.60
Lama 1	−0.034	0.626	−0.15	−0.06
Lama 2	0.306	1.083	0.80	0.29

Note: t-tests with 7 degrees of freedom, 2-tailed.
*$p < 0.05$.
**$0.05 < p < 0.10$.

targets, a parapsychological explanation is still required for any significant results. At this stage, parapsychologists have no evidence-based solutions to the problem of psi-missing in free-response tasks. Until we do, it's essential to keep an open mind regarding psi-missing scores.

Table 5 shows the TrDev average scores of each participant, including a single mean t-test of the participants' 8 trials against chance expectation of zero.

In Table 5, there is 1 participant, a Geshe, with an independently significant average TrDev of −0.518 (SD = 0.479) which yields t(7) = 3.06, p = 0.018, 2-tailed. (NOTE: We expect, by chance alone, that 1 out of 18 participants would score at the 5% significance level.) One other monk, a Rinpoche, scored an average TrDev of −0.429 (SD = 0.617), which gives t(7) = −1.97, p = 0.09, 2-tailed. The monk group showed more extreme scores than the student group. Four of the 12 monks had individual average TrDev scores more than 1 standard deviation from chance expectation, while only 1 of the 6 students did.

Finally, it was of interest to examine the TrDev scores according to the monk hierarchy. Among the 12 monastics there was 1 Nun, 6 Geshes, 3 Rinpoches, and 2 lamas. Table 6 shows the mean TrDev scores of the nun, Geshes, Rinpoches, and lamas.

Here we see that 1 group, the Rinpoches, score significantly in the psi-missing direction, whilst the 2 lamas are the only group to score in the psi-hitting

TABLE 6
Mean Target Rating Scores (TrDev) for Monastics

Group	Statistic	TrDev	t-test	Effect size (r)
Nun (1)	M	−0.099	−0.30	−0.11
	SD	0.947		
	n	8		
Geshe (6)	M	−0.143	−1.22	−0.18
	SD	0.816		
	n	48		
Rinpoche (3)	M	−0.318	−2.09*	−0.40
	SD	0.744		
	n	24		
Lama (2)	M	0.136	0.62	0.16
	SD	0.873		
	n	16		

*$p < 0.05$ (2-tailed).

direction. Figure 2 compares the average effect sizes across groups of participants. It illustrates the scoring tendencies rather nicely.

Discussion

This study, the first formal test of this hypothesis, suggestively confirms the preliminary findings from the prior ashram studies, that years of practice of meditation is related to more positive psi scoring. The number of hours of meditation practise was in the predicted direction, but not significantly so, whilst asana and pranayama practise was unrelated to psi scoring. In fact, very few of
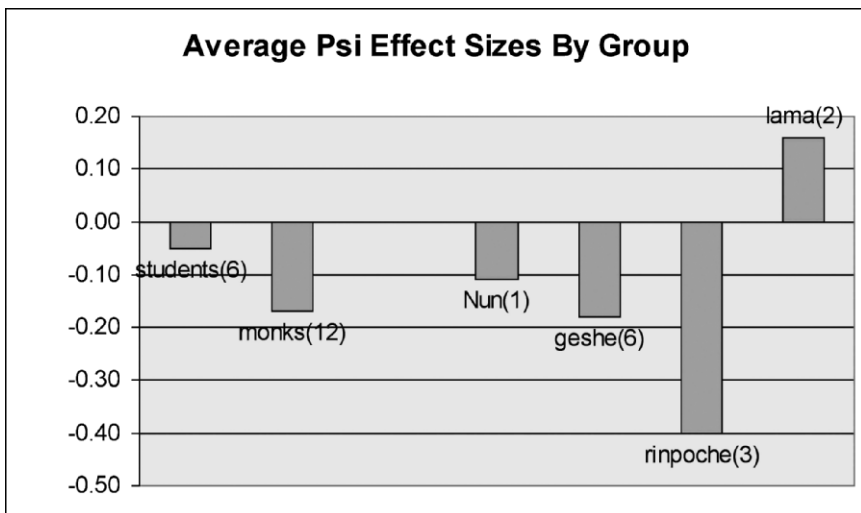
Fig. 2.   Average effect sizes by groups.

the monks practised any asanas, though most did some form of pranayama prior to meditation. We can, therefore, tentatively suggest that as you practise meditation, it is the consistency of the practise day by day, year by year, rather than doing long retreats or extensive hours, that is the prime factor in affecting consciousness, so as to have greater clarity of awareness as measured by this psi task. Doing long retreats was negatively related to psi awareness, but, as this is the first time this measure has been included and the correlation is non-significant, it is better not to attach too much importance to this finding. Although not reported in Roney-Dougal and Solfvin (2006) owing to lack of space, this consistency of practice being a key variable was suggested by the initial preliminary analysis of the ashram studies (Roney-Dougal, 2003).

However, as pointed out earlier, this is confounded by the age of the participants. The mean age of the Western students was 36 years (range 27–44); that of the Geshes was 40.5 years (range 35–48). The Rinpoches were comparatively young with a mean of 26.7 years (range 22–27), whilst the lamas were much older at 55 years (range 44–66). The significant correlation is weighted heavily by the significant psi-missing of the comparatively young Rinpoches at one end and the psi-hitting of the lamas. Obviously older monks were more likely to have done more years of practice, hence the confound with age.

The overall non-significance of the psi scoring is almost to be expected when working with such a wide range of participants as we had here—from Western students, to Tibetan monks just starting meditation practise, to one old lama, a Khensur (ex-abbot), who had practiced for 35 years and who lived in a small monastery 4,000 m up a mountain in a remote valley in Ladakh in the Himalayas. Although not apparent with this rating based analysis, the Khensur had a 50% direct hit rate.

There were 3 participants who scored most strongly in the psi-missing direction, 1 Geshe and 2 Rinpoches (TrDev = –0.52, –0.44, –0.43). These 3 were participants who, quite independently of each other, and not knowing the other participants, reported during the post-session interview that as a child they had had past life memories of being a monk in Tibet during the Chinese invasion—with the resultant imprisonment, torture, and death. For 2 of these, independent confirmation from relatives was obtained prior to analysis, and Jerry Solfvin, who performed the analysis, had no knowledge of these reports. Whatever might be the cause of their psi-missing, this is certainly an unexpected and interesting correlation worthy of much discussion.

The other interesting data to emerge from this analysis are the independently significant psi-missing of the Rinpoches. Obviously this is composed in large measure of the 2 already mentioned who had had childhood memories of a previous life, which is presumably partially the reason they were selected as tulkus. However, Tibetan traditions accord a very special status to these people, believing that they were high lamas in their previous life and that they consciously chose to reincarnate to help all beings attain enlightenment—the bodhisattva ideal. Whilst there has been considerable research with children who

talk about a previous life, these have all been cases where there was no particular training in passing through the intermediate period between one life and the other with the conscious intention to reincarnate. Here we have a group who are considered to have mastered this task—and we find with them that there is significant scoring, albeit in the psi-missing direction.

There are many possible reasons for psi-missing, as discussed in our earlier paper (Roney-Dougal & Solfvin, 2006). The most obvious possibility is that with the Tibetan community participating in this, it was their first exposure to science. Only in the past 4 years has there been any science taught (to Gelugpa monks only), and that as a voluntary class during their lunch break—so very, very few monks have any idea about science, its methodology, premises, etc., and most are very suspicious of it considering that science is responsible for the breakdown of Western spiritual traditions. To find any monks willing to participate was possible only because His Holiness Dalai Lama is so keen on Buddhist teachings being related to scientific findings. The monks were therefore doing something very alien to them and, for most, primarily because His Holiness supports meditation research.

However the 3 Rinpoches and 1 independently significantly scoring Geshe account for all of the non-chance psi-missing, and 3 of them have past life memories, 2 of them being particularly unpleasant. The 1 Rinpoche who did not mention previous life memories in the interview did not score so strongly. Could it be that there is some sort of psi block in operation here? Owing to trauma from a memory holding over from what may have been a previous life? Far-fetched but well worth speculating about.

Of concern however is that this psi-missing amongst the younger people distorts the correlation. This is the same distortion as found in the first ashram study (Roney-Dougal & Solfvin, 2006). This correlation significance in meditation studies occurring partially as a result of psi-missing was also found by Dukhan and Rao (1973) in their study, in which beginners and more advanced meditators both obtained highly significant psi-missing prior to meditation with significant psi-hitting after meditation. Roll and Zill (1981) obtained a similar significant difference, with the participants scoring negatively before the meditation and positively after. They consider that these results are more due to the participants conforming to the experimenters' wishes than to the effect of meditation per se, because the significance of their study was primarily due to the decreased scoring before the meditation.

Therefore, though there are now 3 studies which all point to more advanced meditators scoring better than beginners, it is not clear exactly what this means. The most that can be said is that those who have practised meditation for more years are less likely to psi-miss—for whatever reason that might be.

Conclusion

This first formal experiment of the hypothesis, that years of practice of meditation affects one's change in awareness at the clairvoyance and pre-

cognitive level, gives support to the Yogic and Buddhist teachings which state that such abilities arise as a result of meditation attainment. This conclusion is qualified by the fact that the correlation occurs primarily owing to extensive psi-missing by many of the participants. The cause for this psi-missing is uncertain.

Acknowledgements

References

Conze, E. (trans. & ed.) (1975). *The Large Sutra on Perfect Wisdom*, New Delhi, India: Motilal Banarsidas.

Dukhan, H., & Rao, K. R. (1973). Meditation and ESP scoring. In Roll, W. G., Morris, R. L., & Morris, J. D. (Eds.), *Research in Parapsychology 1972* (pp. 148–151). Metuchen, NJ: Scarecrow Press.

Honorton, C. (1977). Psi and internal attention states. In Wolman, B. B. (Ed.), *Handbook of Parapsychology* (pp. 435–472). Van Nostrand Rheinhold.

Jahn, R. G., Dunne, B. J., Nelson, R. D., Dobyns, Y. H., & Bradish, G. J. (1997). Correlations of random binary sequences with pre-stated operator intention: a review of a 12-year program. *Journal of Scientific Exploration, 11,* 345–367.

Lamrimpa, Gen (1995). *Calming the Mind: Tibetan Buddhist Teachings on Cultivating Meditative Quiescence*. Ithaca, NY: Snow Lion.

Lodro, Gedun (1998). *Calm Abiding and Special Insight*. Ithaca, NY: Snow Lion.

Roll, W. G., & Zill, R. (1981). Psi scoring on individual and group targets before and after meditation. In Roll, W. G., & Beloff, J. (Eds.), *Research in Parapsychology 1980* (pp. 73–75). Metuchen, NJ: Scarecrow Press.

Roney-Dougal, S. M. (2003). *Free-response Psi experiments in a Yoga ashram: preliminary studies: part 2*. Paper presented at SPR Conference, Manchester, UK, September.

Roney-Dougal, S. M. (2006). Taboo and belief in Tibetan psychic tradition. *Journal of the Society of Psychical Research, 70,* 193–210.

Roney-Dougal, S. M., & Solfvin, J. (2006). Yogic attainment in relation to awareness of precognitive targets. *Journal of Parapsychology, 70,* 91–120.

Schmeidler, G. (1994). ESP experiments 1978–1992. In Krippner, S. (Ed.), *Advances in Parapsychological Research* (Vol. 7, pp. 104–197). McFarland.

Tsong Khapa (2002). *The Great Treatise on the Stages of the Path to Enlightenment: Lam Rim Chen Mo*. Ithaca, NY: Snow Lion.

APPENDIX 1
Meditation Attainment Questionnaire

Name: Date:

1) For how many years have you
    been practising meditation:

2) During this time:

a) For how many years have you practised:

Asana

as a daily practise   estimate hours/day

as a weekly practise   estimate hours/week

irregularly   estimate hours/year

Not at all

Please circle the level of practise you are
   doing at the moment.

b) For how many years have you practised:

Pranayama (breath techniques)

as a daily practise   Estimate hours/day

as a weekly practise   estimate hours/week

irregularly   estimate hours/year

Not at all

Please circle the level of practise you are
   doing at the moment.

3) For how many years have you practised:

Meditation

as a daily practise   Estimate hours/day

as a weekly practise   estimate hours/week

irregularly   estimate hours/year

Not at all

Please circle the level of practise you are
   doing at the moment.

What type of meditation do you practise:

i) Concentration (one-pointed) meditation

Please specify practise/s you do

ii) Analytical inquiry meditation

Please specify practise/s you do
iii) Visualisation practices
Please specify practise/s you do
iv) Special insight meditation
e.g.) Emptiness meditation
Bodhicitta and Compassion meditation

4) For how many years have you practised:

Dream Yoga
as a daily practise
as a weekly practise
irregularly
Not at all
Please circle the level of practise you are
    doing at the moment.

5) Have you practised any of the **Ngondros**?
If yes,
Which ones have you completed?   How many times?
Which Ngondros have you done partially?   How much?
Not at all

6) Have you completed any retreats?
If yes,
How many?
For how long?

APPENDIX 2
Session Instructions

(All participants are given the following instructions, spoken in English on the computer at the appropriate time interval, and recorded on tape in Tibetan for non-English speakers. They are also written in Tibetan for them to review if necessary. These instructions are fully discussed until the participant clearly understands what is required of them. For some participants this took two or three sessions.)

1) The session is now about to begin. Please relax your body completely for a few minutes.
2) It is now time to make your resolution. This is a short statement of intent that you will become aware of the target picture which you will see on the computer at the end of the session. Please repeat this to yourself three times in the certain knowledge that it will come about.
3) Please begin your 15-minute meditation practise.
4) Staying in your meditation state, for the next few minutes look into the space

behind your closed eyes and allow any thought, image, feeling, emotion, memory, come to mind and know that it is related to the target picture.

5) Now review what you have just experienced so that you remember your experience fully.

6) It is time to complete your meditation. Please ask the experimenter to join you now.

Judging Instructions for Precognition Research

1) Verbally describe your experience during the awareness session—and anything you feel might be relevant from before this. Remember shape is important for some people, feelings, intuitions, hunches, random thoughts, memories, associations, synchronicities, etc., are more relevant for others. As you practice you will learn the type of mentation that is appropriate for you; the way that you pick up psychic impressions.

2) Draw out any images and try not to label them. The verbal label of a shape is very often a distraction.

3) Look at all four pictures on the full screen starting with picture A, top left; then picture B, top right; then picture C, bottom left; then picture D, bottom right.

4) Look at them again and find connections between all of them and your experience that you have described—as well as anything that you remembered whilst looking at the pictures, or any feelings, intuitions you receive whilst looking at them.

5) Decide which connection is the strongest—i.e. which picture you think is the target, the one that you will see at the end of the session—based on your experience.

6) Give this picture a rating from 1–99, the higher the rating, the stronger your confidence that it is the target. A rating of 99 means you are absolutely certain that it is the target; of 75, that you think it might be; of 50, that you are unsure; of 25, that you don't think it is; of 1, that you are absolutely certain it is not the target. A rating of 1 is as strong as a rating of 99.

7) Decide which picture is your second choice, the one that is second closest to your experience and give this a lower rating than the first choice; repeat for third and last picture.

8) When you are absolutely certain get feedback.

Notes

[1] A tulku is a person who is considered to be a reincarnation of a high lama who has attained to conscious rebirth for the purpose of gaining enlightenment for the sake of all sentient beings.

[2] A lama is formally defined as a monk who has completed a 3 year, 3 month, and 3 weeks retreat, but we are using the term more loosely in this study.