# AN EXPLORATORY STUDY INTO TRADITIONAL ZULU HEALING AND REG EFFECTS

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ABSTRACT: This paper presents the results of a pilot study that investigated how directed mental healing by indigenous healers in South Africa impacted upon the functioning of a Random Event Generator. Participants were asked to focus their intention directly onto the device and administer healing as they would do with actual clients. A cumulative effect that significantly exceeded chance expectancy (Stouffer Z = 2.531, p = .01) provides support for the view that this is an approach worth pursuing, and that a larger scale study may be of merit.

There are estimated to be over 250,000 traditional healers in South Africa (Edwards, 1999), of which two distinct types can be differentiated: the *inyanga* (italics refer to the Zulu term), who specialises in herbal medicines and potions; and the *isangoma*, who uses divination, mediumship, and what might be termed "psychic healing" to assist their clients. The *isangoma*'s position is one of calling by the ancestors, and can happen at any time of life. It begins with a period of possession, followed by a period of apprenticeship under an established *isangoma* that usually lasts for about nine months and terminates with complete *ukuthwasa* (rebirth). The *isangoma* is considered an incarnation of the ancestors and is thus deemed able to communicate with the spirit world and universe at large.

These healers are often the first port of call for the indigenous peoples during times of illness and emotional crisis, and Edwards (2002) has reported that the interventions these healers provide are commonly psychological in nature, and equally as effective as those from modern professional counsellors. Despite the fact that many interventions might be conventional in nature, many clients believe that *izangoma* (plural form) hold psi abilities.

There has been widespread experimentation and commentary into direct mental interactions with living systems (DMILS), including lower level target organisms such as bacteria (e.g., Nash, 1984) right up the scale to human beings. Studies have indicated how volition can apparently affect the level of nervous system arousal (e.g., Braud & Schlitz, 1983), the hemolysis rate of blood (Braud, 1990), and larger scale well-being through mental healing/prayer (e.g., Byrd, 1988). A recent meta-analysis by Schmidt, Schneider, Utts and Walach (2004) comprised of 36 studies provides support, albeit limited, for the validity of direct mental interactions (d = .11, p = .001).

Aside from biological target systems, psi research has also seen Random Event Generators (REGs) used extensively, both under volitional protocols, e.g., illumination of a circular array of lamps (Schmidt, 1973) and purportedly to measure unconscious background effects, e.g., FieldREG studies (Blasband, 2000; Nelson, Bradish, Dobyns, Dunne, & Jahn, 1996; Nelson, Jahn, Dunne, Dobyns, & Bradish, 1998; Radin, Rebman, & Cross, 1996). A 1989 meta-analysis by Radin and Nelson examined the effects of volitional approaches, and drew data from over 800 formal and control studies conducted between 1935 and 1987. Mean chance expectancy would predict a 50% hit rate, yet results showed a 50.02% hit rate for control studies, and 51.2% under active influence conditions (unweighted 50%-equivalent averages), an outcome that represented a small effect size (.0003) but a chance likelihood of  $p < 10^{-35}$ . An update by Radin and Nelson (2000) saw 92 additional studies incorporated, and file-drawer effects notwithstanding, further demonstrated the robustness of the effect ( $p < 10^{-50}$ ).

When volition appears to facilitate health improvements in the real world, there are inevitable considerations as to what mechanism might be at work. Are results due to psychosomatic or placebo effects facilitating physiological/immune responses in the client, or is there some form of genuine psi effect operating? There is some logic, therefore, in trying to measure healers on systems that seek to quantify the level of interaction between a healing mind and a target system. A recent paper by Radin, Taft, and Yount (2004), for example, uncovered negentropic effects in REGs during healing practices, and it seems reasonable to investigate REG-healer interactions further. This report thus presents exploratory data looking at how *izangoma*, utilising mental healing, affected the behaviour of an REG device.

#### Method

#### Participants

Four *izangoma* (3 female, 1 male) of high local standing were recruited through personal approaches by an intermediary from the University of Zululand in KwaZulu-Natal, South Africa, and paid R150 for their participation. Testing took place on the morning of July 9, 2004. Due to pressing time constraints, the number of healer participants was fixed at four, and of these the first *isangoma* was tested in one location, the other three at a different venue. The schedule meant that time with each *isangoma* was limited, and taking matched control data (e.g., nonintention) would have increased the length of this exploratory study beyond a realisable level.

### Materials

To measure any psi effects, an Orion REG was connected via a 1-m cable to the serial port of a 600 MHz Intel Celeron chipped laptop computer. This operated a custom-written Quickbasic program that sampled the Orion at a rate of 200 bits/s. The REG used in this study is regularly tested under no-subject conditions within controlled environments, and has thus far not shown any evidence of bias. In this study, the first author started and stopped the sampling process, no system feedback was provided during testing, and the authors remained blind to the data and its subsequent analysis until the final session was completed (i.e., all data had been collected).

To examine REG anomaly across each trail, raw data was converted into Stouffer Z values, and a corresponding *p*-value (two-tailed) obtained. Group effects were discriminated through two separate analyses, both of which have been used in field consciousness research. Directional anomaly was examined through cumulatively summing the data (mean shift), and nondirectional effects were analysed with  $\chi^2$ . Chi-squared values were derived from each trial's Stouffer Z.

#### Procedure

Pretrial, each participant was briefed as to the purpose of the experiment, namely to investigate how the output of an REG system, which was represented as a tool for measuring consciousness, is affected by healing. In turn, concepts of inhloso (intention), ngqondo (mind), ukuzwa (consciousness), and ukwelapha (healing), were employed to explain the type of interaction required. Izangoma can be highly suspicious, not least when dealing with unfamiliar objects/technologies, and care was taken to act transparently and with honesty. As part of the briefing, the REG system was activated for a short period without feedback to demonstrate that it was ostensibly a passive device, and to diminish any concerns the subjects held (e.g., that the systems might take away any special abilities). With formal trials, subjects were explicitly instructed to hold the REG in their hand, to focus attention onto the device, and to concentrate on the transference of "intentional healing" onto the REG as they would do with their clients. Following pretrial discussions among the authors, a task duration of 5 min was chosen, as it was felt to be of a satisfactory and equivalent length to some periods of real-world healing. Each isangoma was subsequently briefed that 5 min of healing would be required. Author three, using his wristwatch to mark time, was responsible for signalling the system operator and each participant to start and stop each trial, and the small differences in trial lengths reflect the slight variability in this timing/signalling protocol. The reader will note that the first isangoma participant completed only around 4 min of testing: at this point she

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decided unilaterally to terminate her trial, as she felt she was finished. Her data was incorporated nonetheless.

## The Experimenters

The three authors acted as experimenters and were physically present during each *isangoma*'s trial. Since each is capable of being a source of psi, as per the divergence problem, each member of the group was tested back at the University of Zululand under the same protocol (i.e., each researcher held the REG and tried to "heal it" under whatever strategy they deemed effective) in an attempt to gauge experimenter effects. The first author was entirely responsible for operating the REG equipment during these trials.

#### RESULTS

#### Izangoma Data

Table 1 (below) shows REG data sampled during the *izangoma* healing periods and shows significant cumulative anomaly across the whole 236,400-bit sample. Figures 1 and 2 graphically represent the REG outputs for the *izangoma* group as a whole and as individuals.

Partic- ipant	Devia- tion	200- bit cycles	SD	Diree ana	ctional alysis	Nondirectional analysis		
				Stouf- fer Z	p-value (two- tailed)	χ² value	DF	₽- value
Isan- goma 1	180	259	6.471	1.728	.084	2.988		
Isan- goma 2	58	307	7.586	0.436	.660	0.190		
Isan- goma 3	200	311	7.497	1.513	.130	2.288		
Isan- goma 4	189	305	7.123	1.519	.129	2.308		
Total	627	1182	7.205	2.531	.011	7.774	4	.100

#### TABLE 1 REG DATA FOR THE FOUR IZANGOMA TAKEN DURING PERIODS OF HEALING



Figure 1. Cumulative izangoma data; parabola represents p = .05 level, two-tailed.



Figure 2. Individual izangoma trials

## Experimenter Data

Table 2 shows REG data sampled during the healing periods attempted by the three authors. Figures 3 and 4 graphically represent the REG outputs for the author group as a whole and as individuals.

Partici- pant	Test or- der	Devia- tion	200- bit cycles	SD	Directional analysis		Nondirectional analysis		
					Stouf- fer Z	₱- value (two- tailed)	χ² value	DF	∲- value
Author I	3rd	-258	302	6.996	-2.122	.034	4.503		
Author 2	2nd	130	301	6.847	1.094	.274	1.197		
Author 3	lst	28	301	6.893	0.234	.815	0.055		
Total		-100	904	6.926	-0.480	.630	5.755	3	.218

TABLE 2	
REG DATA FOR THE THREE AUTHORS DUR	ING
THEIR ATTEMPTS AT HEALING	



Figure 3. Cumulative author data



## Figure 4. Individual author trials

As a whole, data from the experimenter group did not show cumulative anomaly norsignificant variance (as per  $\chi^2$  analysis). However, Experimenter 3 produced independently significant anomaly.

#### DISCUSSION

From the experimenters' perspectives, it seemed clear that the four *izangoma* were genuinely interested in the research; furthermore there is a confidence that the healing interactions were attempted sincerely. As the results show, the *izangoma* data were significant when cumulatively summed, as each of the four trials produced an excess of ones over zeroes, and the positive results provide some support for the idea that healing processes may be capable of influencing target systems without resorting to conventional explanations (e.g., placebo effects, behavioural modification, etc). The fact that Author 3 was responsible for signalling the beginning and end of fixed-length trials might go some way toward assuaging fears that positive results were derived through fortuitous data sampling (e.g., Decision Augmentation Theory, May, Utts, & Spottiswoode, 1995) mediated by the system operator/first author.

Separately, it is worth pointing out the importance of a healer's self-belief as a mediating factor. Belief has been repeatedly implicated in psi studies, both as a long-term property (e.g., Schmeidler & McConnell, 1958) and a short-term one (e.g., Batcheldor, 1984). *Izangoma* believe they have been "chosen" by the ancestors. This may therefore bring about what might be termed "ability by decree" and a heightened conviction in the power to heal.

The experimenter sample was not significant as a whole, but the fact that the first author's data was independently significant provides a note of caution. This individual was the lead researcher in terms of the

study proposal and had the highest level of connection to the measurement process. Thus there remains the real possibility that he was responsible in some way for directly influencing the results—possibly to conform with his beliefs and expectancy in terms of study outcome.

It is worth noting that "acute" testing of REGs, although not explicitly the Orion, has shown that environmental factors such as temperature and electromagnetic fields have no effect on REG outputs (Nelson, Bradish, & Dobyns, 1989), and it may be tentatively suggested that holding the REG should not prove a contributory factor. However, with this is mind, the first author conducted a sequence of informal post hoc trials that examined whether the act of holding the REG impacted upon its functioning. Testing took place in isolated test conditions, six months after the initial data were collected, during which time the author held the REG for 20 five-min trials. During these periods, no intention, healing, or active influence was directed toward the REG device, and the experimenter remained blind to all data until the final trial had been conducted. Of the 20 trials, no single episode produced independently significant anomaly at the two-tailed level; the Stouffer Z range across trials was -1.84 to +1.71. When the data were cumulatively summed, the Stouffer Z was +0.646 (p = .518, two-tailed), and chi-squared analysis was nonsignificant:  $\chi^2(20) = 18.375$ , p = .563. These trials suggest that the act of holding an REG does not appear, in itself, to facilitate bit stream anomalies.

In conclusion, results from this pilot study seem encouraging. The fact that overall significance was obtained in spite of the relatively low sample size suggests that there is a foundation to consider a larger scale formal study, perhaps using repeated measures with a larger group of *izangoma* over a longer period. In turn, said study should employ formal control periods of nonintention, in which *izangoma* hold the REG device but do not seek to interact consciously with it, as well as periods in which the device is simply within their proximity. In addition, efforts to examine *izangoma* concepts of healing should be attempted, as well as comparing the mental strategies and states (adrenergic/cholinergic, etc.) used and experienced during the healing process.

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# McCLENON'S RITUAL HEALING THEORY: AN EXPLORATORY STUDY

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ABSTRACT: This article concerns the variables antecedent to the beliefs surrounding, and experience of, shamanism. McClenon has devised a model—Ritual Healing Theory—in which a chain of variables leads to shamanic belief and experience and thence to healing of various sorts. The present study examined a number of variables in order to ascertain in a preliminary way the viability of McClenon's model: childhood trauma, hypnotizability, anomalous experience, and shamanic belief and experience. Childhood trauma was positively but nonsignificantly correlated with hypnotizability, hypnotizability was positively and significantly correlated with anomalous experience, and anomalous experience was positively and significantly correlated with shamanic belief/experience. Thus there was some evidence that the various variables postulated by McClenon in the chain of causation are related to each other in the way that he posits. Finally, transliminality correlated with all the variables in the model except childhood trauma. It is suggested that transliminality may be located between hypnotizability and anomalous experience or conceivably could be a factor underlying all the variables.

The practice of shamanism still remains a vital tradition in many countries. McClenon (2002) defined the "shaman" as the person who links the world of people and the world of the "spirit(s)" and uses ecstatic trance states to "travel to other dimensions." The shaman's primary objective, however, is healing of others, and ritual hypnotic processes are the central element within these shamanistic therapies (Krippner, 2000). It is through rituals that the shaman is able to perform curing/healing functions (Walsh, 2001), and the majority of the rituals performed are carried out with the fundamental motive to heal. Unlike "Western" culture, in which sickness tends to be viewed as "bad" and the fault or weakness as belonging to the physical body, in shamanism illness or bad health are believed to be caused by harmful spirits. A shaman who follows the correct procedures and imprisons these spirits becomes a friend of the community and helps treat and fight off sickness (Lewis, 1985). Spiritual healing thus aims to remove the evil spirit/demon/sickness.

Shamanic hypnosis of the afflicted person is the most commonly employed technique used to aid in healing both psychological and physical disorders. Hypnosis, stimulated for the benefit of shamanic rituals, can include the following activities: sensory restriction or overload, fasting, ingesting drugs, repetitive movements, dancing, drumming, and chanting (Lewis, 1985). These are all features that can induce altered states of consciousness (Winkelman, 1990). Clottes and Lewis-Williams (1998, cited by Krippner, 2000) suggested