Introducing Real-Time Indeterminate Synthetic Music Feedback (RT-ISMF) as a Therapeutic Intervention Method

Iebele Abel, 2013
Institute of Philosophy,
Faculty of Humanities,
Leiden University (NL)

"We are proud of a human nature that could be so passionately extreme,
but we shrink from advising others to follow the example."

William James (1902), The Varieties of Religious Experience[1]

Abstract

Started in 2007, partly unpublished artistic research has resulted in the development of a Psi-related collection of methods and instruments, which features possible applications in healing and therapeutic intervention[2]. This article will introduce this collection of methods and instruments, under the name Real-time Indeterminate Synthetic Music Feedback (RT-ISMF). The ISMF system generates indeterminate music by transforming quantum noise signals from a REG (random event generator) into uniformly distributed musical scales, note durations, and note values. The music produced in this way may serve as a continuous micro-PK feedback system, in which the music is the carrier of information produced by the REG (see illustration 1). Listeners to ISFM music have reported deep relaxation in short times. Dream-like images, visions, voices, and sudden insights are experienced, most of them connected in a remarkably meaningful way to important issues in the individual's life. Since 2008, ISMF has been used during formal and informal therapeutic settings like psychological intervention, individual empowerment, relaxation and 'healing.' Evidence for possible applicability as a therapeutic intervention method has been collected from case studies and group events during which ISMF music was central. Case studies show that ISMF may be an effective intervention for a broad range of psychological, yet unclassified discomforts. Combinations of 'exceptional experiences' as well as spiritual and bodily healing are reported. ISMF and the supporting therapeutic interviewing technique have not been documented in publications so far. This article sketches the history, the design and theoretical background of ISMF. Case studies in which ISMF was central are summarized.

Contents

- History of ISMF
- Design of the ISMF instrument
- Theoretical aspects of ISMF
- Therapeutic intervention method
- Case studies
- Discussion

History of ISMF

Starting in 2007, an artistic instrument was designed by the author to study whether human consciousness can interact with artificially generated stochastic processes in quantum-physical systems, as typically produced by quantum based REG's. Originally inspired by neuro-feedback systems that measure electro-physiological brain signals, and consequently produce feedback of these signals in an auditory or visual way[3], the ISMF system is intended to determine the possible influence of human consciousness on physical processes outside of the

body (psychokinesis, precognition), and subsequently translate the results in an artistic manner, i.e. in meaningful music and image. The original aim of this project was to capture moments of increased artistic inspiration by REG's and express these moments in artworks and music. Moments of heightened inspiration were assumed to act on the core instrument of the ISMF system, an REG.[4] As such, the system is supposed to produce image and music without physical labor of the artist.[5]

In its initial phase, the project received collaboration from psychologist and physicist Dick Bierman (University of Amsterdam, Utrecht University for Humanism). Soon the project aroused the interest of Hans Gerding, then professor of "Metaphysics in the spirit of Theosophy" at the Institute of Philosophy of the Faculty of Humanities of Leiden University. Hans Gerding is also Director of the Institute for Parapsychology in Utrecht. It was noticed that the music produced by the ISMF system could invoke exceptional and 'healing' experiences while subjects listened to the music for a short time (between 8 and 20 minutes), suggesting that these particular kinds of experiences might be of interest in philosophy and psychology. At the recommendation of TNO (Netherlands Organization for Applied Scientific Research**)** and the Global Consciousness Project (Princeton, USA), in 2010 a study was initiated at Leiden University to further examine the theoretical aspects and the possible practical therapeutic applications of the ISMF instrument.

Although many micro-PK experiments try to quantify and objectify intentional psychokinetic effects, ISMF developed along the idea that meaningful experiences may arise when subjects are exposed to systems designed to measure these effects, typically by use of REG signals feedback. Case studies show that psychological events which arise while listening to ISMF music result in narratives that include exceptional experiences, especially when subjects are in the process of making important decisions in life, or when subjects suffer from psychological or physical discomforts. This observation meets the idea expressed by Braud and Schlitz that psychic interactions occur in contexts characterized by need. Such need may be healing of bodily or spiritual functions. "In such contexts information may be acquired by or effects produced which are meaningful, relevant and important to those involved. Psi may serve an adaptive function, providing information or outcomes, which are biologically or psychologically significant."[6]

The exceptional experiences that are reported include impressions of bright, 'indescribable' lights and shining objects, the hearing of clear and authoritative voices, clairvoyance[7], meaningful dream-like visions and recollections, impressions of forgotten dreams from childhood, contact with angels, entities and God, travelling through the universe, oneness, clear impressions of subjects' own inner body, presentiments, sustained feelings of meaningfulness of life, sudden relief of fears (peace) or bodily sensations, sudden insights, etc. These experiences seem remarkably purposeful in understanding and solving issues in the individuals' own life, which subjects were not able to solve by reason alone. These experiences do not stand on their own. "The possible therapeutic value of actively inducing mystical experience in receptive clients has been explored by numerous investigators. Among these experiences timelessness, bright light, a sense of oneness with the world, and profound peace were reported."[8]

In September 2012 ISMF was presented for the first time to professionals working in the field of psychology and psychiatry at the international conference Consciousness in Crisis (NL). Therapists of different professional backgrounds and nationalities showed interest in ISMF. At that time it was decided that ISMF should be made available for therapists and researchers worldwide – a milestone that was achieved in January 2013.

Design of the ISMF instrument

In order to avoid any misapprehension of the ISMF instrument it should be stressed that ISMF not only differs from any known 'music therapy', but also radically differs from neuro- and biofeedback machines, which typically are supposed to constitute a feedback loop between objective physiological or neurological measurements and subjective mental or bodily arousals. ISMF does not make use of physiological or neurological measurements, not in any way. On the contrary, ISMF is developed along the idea that information exchange and feedback between human consciousness and the physical world outside of the body, including machines, may be possible in a distant, non-contact, and non-local way.

The ISMF system generates indeterminate music in real-time, by transforming quantum noise signals from a REG into uniformly distributed musical scales, note durations, and note values. No specific patterns can be

traced or predicted in the music, because *all* patterns like rhythm, figure, scale, note duration and pitch are determined by the output of the REG. The number and variations of the repetitions also are determined by the REG output. The listener cannot predict the music produced this way. The music is, however, filtered through an algorithm that prevents the music from sounding atonal. Although the music is generated in a synthetic way, each note and its variety of expressions (attack, decay, sustain, and release) has been carefully recorded by skilled musicians and recording technicians. The music may sound strange or unexpected due to its indeterminate nature, but it does not sound artificial because of the acoustic recordings of each note expression separately.

ISMF music is generated in real time, at the same moment one listens to it. The music is distributed to therapists by means of so-called ISMF-nodes. An ISMF-node is basically a machine that includes an REG and a computer that performs the calculations to transform the REG bits (up to 20 Kbits per seconds) into a musical score, real-time audio synthesis, and Internet connection. To exclude any interference of listeners and the ISMF nodes, ISMF-nodes can only be accessed remotely by means of an Internet application. Therapists can use a control panel to adjust the duration of an ISMF music session between 1 and 60 minutes.

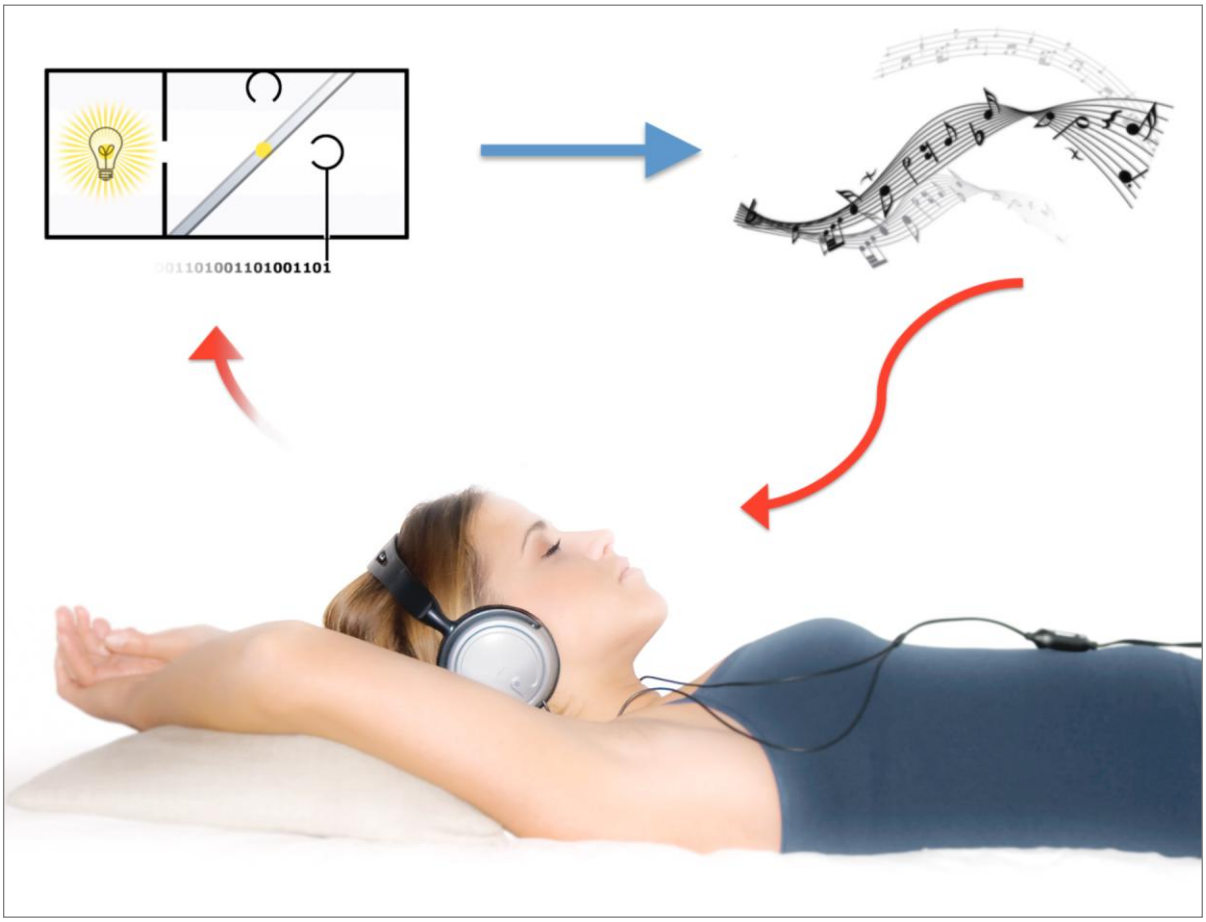


Illustration 1. Scheme of RT-ISMF. An REG (top-left) produces continuous stream sequences of random bits, which are transformed into a continuous stream of music. Feedback may occur when emotional states of the listener altered by the music, alter the pattern of bits produced by the REG.

The data generated by the ISMF system - the musical score, the music itself, and the REG data - are destroyed (i.e. not saved) as soon as the music produced in real-time is delivered to the listener. This is because there are indications that micro-psychokinetic effects may be due to retrocausality. Retrocausality explains psi phenomena as an arrow pointing backwards in time.[9] In the case of ISMF music this may mean that music generated now may be influenced by someone listening to it at a later time. “Fully deterministic systems with fixed conditions would not be subject to retrocausation because their behavior could be described without any reference to the retrocausal stimulus. Therefore an element of uncertainty (i.e. chance) must be introduced to

allow for the retrocausal effects."[10] Recorded ISMF music can be seen as a deterministic system[11], and as such may decrease possible psi effects. Also, we do not want anyone other than the client to be responsible for possible occurrences of psi effects. To ensure that retro-causality is not in effect, therapists and researchers who work with ISMF therefore have access to ISMF nodes only after they have signed a contract that they would not record, reverse engineer, or further distribute ISMF music. Another reason to destroy the data is that this ensures that the listener has a genuine unique and 'intimate' musical experience. Nobody else will ever hear - now, in the past, or in the future - the same ISMF music.

Theoretical aspects of ISMF

This article is intended as a starting point for future exploration of ISMF as a Psi-related therapeutic intervention method. Much related research is focused on the physics of psi phenomena. Psi phenomena are generally denoted as anomalous processes of information or energy transfer that are currently unexplained in terms of known physical or biological mechanisms.[12] Defined as such, it is frequently neglected that psi phenomena often also include intense human experiences. This article tries to outline ways to perform research on psi phenomena and their applications in the humanities. Anomalous phenomena and the experiences induced by them may find application in the arts, psychology, and philosophy – areas in which the human experience of reality is central. The purpose for which ISMF is developed is to collect qualitative data ('experiences') rather than quantitative data ('numbers'). The collected qualitative data may serve as evidence that psi-related experiences are meaningful. ISMF has been used to date in order to collect narratives from people after they have listened to ISMF music. These narratives suggest that, somehow, the ISMF system relates to the way subjects were able to get close to their feelings and got answers to difficult emotional questions in a short time. This observation, whether we understand the active principle behind ISMF or not, makes ISMF a candidate for a low cost and effective intervention method. In order to be able to use ISMF as an intervention method, it is not absolutely necessary that the method is based on a theory (which may, or may not be described in terms of known agents). As long as the ISMF intervention results in relief of discomfort and/or better insight into oneself, it can be used on a purely empirical basis. Moreover, there are scholarly writings in the area of the humanities that may help our understanding of why and how the ISMF apparatus combined with the proposed interviewing technique may evoke cross-boundary experiences and insights. In the next sections I will shortly sketch some of these findings, which I hope to be able to describe in more detail in future writings.

ISMF Music and Emotion

A relevant question to start with is what assumptions make music appear to have therapeutic qualities at all. Even music therapists state that music cannot be considered medicine, as other factors (such as group interaction and the therapeutic alliance) contribute to the therapeutic effect as well.[13,14] Kenneth Bruscia defines music therapy as the "systematic process of intervention wherein the therapist helps the client to promote health, using music experiences and the relationships (between the self and various worlds, like intrapersonal, interpersonal, sociocultural, intermusical, intramusical, etc.) that develop through them as dynamic forces of change."[15] This definition leaves plenty of room for many different forms of music therapy, but carefully avoids including physical healing explicitly. Concerning possible physiological responses to music (and subsequent physical healing), let us consider the rationale "if music is known to influence a physiological parameter such as the heart rate or blood pressure then music can be used therapeutically for patients who have problems with heart disease and hypertension."[16]. Following this rationale, it seems obvious that, due to its indeterminate nature, ISMF music is not likely to influence a *specific* physiological parameter.[17] It seems therefore inappropriate to use ISMF therapeutically for physiological disorders. So what is left for examining therapeutic use of ISMF music are those interventions that are not connected with physiological problems – I would say that what is left to examine in terms of intervention applicability of ISMF are the psychological and spiritual dimensions, dimensions typically concerned with feelings and emotions.

From Plato down to recent discussions on aesthetics and meaning of music, philosophers and critics have, with few exceptions, affirmed a common sense belief in the ability of music to evoke emotional responses in listeners.[18] However, this common sense belief raises philosophical questions for some people, most notably *how* music appears emotional, specifically if the music is purely instrumental. To Stephan Davies, 'pure music'

(defined as stand-alone music played on musical instruments excluding the human voice, and without words, literary titles, or associated texts[19]) has its expressiveness independent of the listener's reaction. The musical experience is one of hearing the music as possessing *appearances* of emotions, while regarding it as neither alive nor as haunted by a 'persona.'[20] Following Davies, ISMF produces pure music by definition. Though artificial and indeterminate, ISMF music still may induce emotional experiences in humans. Concerning music and emotion, demarcation is generally made between conveyed emotions (emotions expressed in music) and elicited emotions (emotions induced in the listener).[21] This demarcation rules out conveyed emotions[22] to be expressed in ISMF music, inasmuch inanimate devices (such as REG's) are not known to be capable of expressing human emotions. Emotions evoked by ISMF music may therefore be interpreted as *pure elicited emotions* that are ultimately restricted to the subjective, experiential realm of the listener, in so far as no informational agent *other than chance* can be determined that aims the experiential realm towards a specific content or direction. Plainly put: it seems safe to assume that emotions can be elicited by ISMF music, and if that happens , these emotions have no other ingredients than those that are present in the listener.

As said before, the view that music evokes emotion is not unanimously accepted. One objection is that (elicited) emotions may be the result of an "attribution error." Listeners could mistake the emotion they perceive in the music for an aroused emotion. To Zenter et al. this is unlikely to be a general tendency. If it were, then instructing listeners to report emotion induction and emotion perception should lead to similar outcomes, which is not the case, as some recent studies show.[23] Such an "attribution error" seems irrelevant in cases in which music is random and artificial (as is the case in ISMF), for there is nothing but chance to which the conveyed emotion could be attributed.

Another and greater difficulty with the statement that music evokes emotion is that there is no agreement on what emotion is. According to Zenter there is, however, "some modest consensus with regard to the view that emotions have more than one manifestation. In addition to subjective feeling, emotions also contain action tendencies, physiological arousal, cognitive appraisals, and expressive motor behavior. (…) Various emotion components are elicited by different objects or events, (…which can be distinguished) between utilitarian and aesthetic emotions. Aesthetic emotions appear to share several features with the larger category of refined emotions such as detachment, self-reflexive awareness, and savoring. (…) Though authentic emotions, refined emotions will express themselves more in virtual than in overt actions, more in low-intensity than in high-intensity physiological arousal. Furthermore, their objects of appraisal are borrowed from the imaginary rather than from the real. Thus, the emotion component most readily activated in the case of refined emotions may be the experiential one—feeling. From this perspective, it would clearly be wrong to downplay the emotional significance of music-induced feelings, should these feelings fail to be consistently followed by those overt actions or by the neurobiological patterning that is characteristic for certain basic emotions."[24] This suggests that emotions, particularly 'feelings borrowed from the imaginary' can be invoked by music, and that among such aesthetic emotions we find self-reflective awareness. Also, emotions evoked by music are likely to be expressed more in virtual than in overt reactions, from which observation we may conclude that physiological and neurological components (objective measures) contribute less to the meaning derived from emotions elicited by music, than do the virtual and imaginative components (subjective measures).

The idea that music and emotions are connected make plausible the idea that music can be used as a therapeutic means. However, a music-specific therapeutic paradigm itself does not exist.[25] In clinical observation the therapeutic use of music often seems adequate and beneficial, but the empirical knowledge in this field is rare and limited, although growing.[26] Research on music therapy overlaps with a wide spectrum of scientific areas, including mathematics, natural sciences, behavioral and social sciences, as well as the arts.[27] Speaking about therapy in general, Michael Lambert arrived at the notion that "extratherapeutic aspects determine 40%, therapeutic relationship 30%, expectancy and placebo effects 15%, and specific therapeutic techniques 15% of the observed outcome variance in psychotherapy studies."[28] Obviously, the therapeutic properties of music are difficult to distinct from other factors, a problem that is further complicated by the vast interdisciplinary scientific specializations involved. Another question is, citing Hillicke: "whether general objectivistic theories and empirical results are adequate for music therapy research. In empirical studies there is a strong emphasis on homogeneity of groups and interventions, but the clinical work often consists of heterogeneous single cases."[29] Though Hillicke sees a "reasonable chance that music therapy will profit from the quickly advancing field of neuroscience in music, "[30] addressing subjective meaning derived from musically invoked emotions by neuroscientific means may be a hard task because refined emotions evoked by music are likely to be expressed more in virtual than in overt reactions (see above paragraph). As I will suggest in the next

sections, the subtlety of such virtual, self-reflective, and imaginative reactions of refined emotions may connect well with some nonlocal aspects of ISMF music.

Non-locality and Healing

Many micro-PK experiments have been performed where human intention alone is supposed to influence a true random number generator.[31] Over three decades, from 1976 to 2007, the PEAR lab produced a significant body of data that centered around the general idea that human intention may be able to influence random processes. Several experimental setups were tested but one was repeated many times: a quantum process was used to produce a random series of events. A human operator was instructed to attempt to influence this process by intention only.[32] These experiments have been replicated by many independent research groups. The debate is still ongoing whether the results of these experiments are significant or not.[33] However, meta-analysis of 515 REG experiments conducted by 91 researchers over a span of 41 years "indicates the presence of a small magnitude, but statistically highly significant and repeatable mind-matter interaction effect."[34]" In a study on two meta-analyses, Stefan Schmidt et al. conclude that the existence of some anomaly related to distant intentions cannot be ruled out.[35]

Although during the PEAR program the main subject of study were inanimate devices, Larry Dossey points to the program's significance for our understanding of healing. "The experiments of PEAR buttress healing studies in humans because they (…) point to a nonlocal manifestation of consciousness that appears demonstrable, repeatable, real."[36] The notion of nonlocal faculties of human consciousness has been of profound significance in late 20th century landmark studies on intentional and distant healing.[37] Inspired by Larry Dossey, Targ & Katra distinguish Era I, II and III medicine, respectively based on the physics and chemistry of the body (I), based on the connection between the individual's brain, mind, and organs (II), and based on nonlocal mind (III). In Era III medicine, Targ & Katra see mind as unconfined by space and time. They recognize that "our local mind may affect healing both within and between people. Non-contact healing modalities between people in each other's presence, as well as between people distant from each other, become possible with nonlocal mind."[38] Based on their own experiments and those of others, Braud and Schlitz argue that psychic interactions occur in contexts characterized by need. Such need may be healing of bodily or spiritual functions. "In such contexts information may be acquired by or effects produced which are meaningful, relevant and important to those involved. Psi may serve an adaptive function, providing information or outcomes, which are biologically or psychologically significant."[39] In the first decade of the 21st century, the idea that nonlocal information transfer between humans consciousness and 'inanimate' water is real, was, for example, popularized by Masuru Emoto in his best selling book *The Hidden Messages of Water*, containing dozens of photographs that claim to illustrate that 'loving' and 'negative' thoughts affect the crystallization process of water. This atmosphere made plausible the idea that the realm of a nonlocal information 'field'[40] could contain 'healing messages.'[41] If micro PK-experiments indeed point to a nonlocal manifestation of consciousness, the idea seems not too far-fetched that subjects may be able to retrieve nonlocal information bits while they are exposed to a 'feedback loop' between their own consciousness and the data generated by a REG device targeted by their consciousness. One may further speculate that such a 'feedback loop,' as used by ISMF in a musical way, might reveal information bits that are entangled with an overall store of subconscious information, past or future, in a way that supports biologically or psychologically significant processes for the subject. Or, as Robert G. Jahn put it: "If, as we have demonstrated, consciousness, *via* its own expressed desire, can bring some degree of order into a simple random string of ones and zeros emerging from a rudimentary electronic machine, is it so unreasonable to suspect that it can invoke similar, or subtler, processes to influence the far more elaborate, relevant, and precious information processing systems that underlie its own health?"[42]

Informational Feedback and Healing

In terms of the subjective sense of connection from human to machines, Jahn and Dunne have widely reported that volunteer operators can significantly alter the output of random number generators in accord with their stated intention, and that the more a person feels in a "resonant bond" with the machine, the stronger the deviation from expected chance is likely to be.[43] Such a resonant bond with the machine may be amplified by expressing the REG output in music, because music is known to have direct effect on human emotion.[44] As with neuro- and biofeedback, feedback of random signals from a REG may increase the proper 'psychophysiologic'

environment for attunement to higher states of consciousness. Higher consciousness is a state of awareness that provides a medium in which profound insight (sometimes called "awakening") can occur.[45] Higher states of consciousness may be increased or evoked by physiological feedback, but feedback also "is one of the very helpful channels in all psi functioning."[46] Furthermore, the earlier the feedback, the greater the hit rate of psi effects is likely to be.[47] In the case of ISMF, the aforementioned "resonant bond" between man and machine might therefore mirror inner emotional states of the subjects in an even more enhanced way, because the informational feedback is performed in real-time. Also psychological factors play a role here. Feynman refers to the quantum measurement problem (QMP), and in particular to "the curious effect whereby quantum objects appear to behave differently when observed than when unobserved."[48] Recently, Dean Radin used a double-slit optical system to test the possible role of consciousness in the collapse of the quantum wave function. Factors associated with consciousness, such as meditation experience, electrocortical markers of focused attention, and psychological factors including openness and absorption, significantly correlated in predicted ways with perturbations in the double-slit interference pattern.[49]

Beside psychological factors, parapsychological research on PK-effects is also thought to deliver evidence of the spiritual nature of man. "It can make two things plausible: parapsychological events can be reconstructed rationally as effects of nonlocal correlatedness to be expected in systems under certain conditions. Spirituality is a concept capable of encompassing parapsychological effects and can be construed as operating on the same basic principles of generalized nonlocality."[50] Once the connection between anomalous nonlocal information exchange and spirituality is made, the much conjectured relation with health[51] appears far less unsubstantiated, supporting the definition of health by the World Health Organization, as "a dynamic state of complete physical, mental, spiritual and social well-being and not merely the absence of disease or infirmity."[52]

Precognitive aspects of ISMF

In the *De Divinatione,* Cicero defines divination as the act of foretelling events that are normally considered as chance.[53] Divination also includes decision making, in the sense that a good decision will prove only to be good at later times. It is common in literature to distinguish natural divination from artificial divination. Clairvoyant dreams belong to natural divination. Artificial divination includes all other kinds, such as those induced by frenzy, consulting oracles, conjectures based on omens (such as anomalies found in nature), and last but not least, conjectures based on artificially generated chance phenomena (which I would like to refer to as *instrumental* divination). Throwing dice, Tarot card readings, consulting the I-Ching, etc., are examples of divinatory use of artificially generated chance. As an example of the actuality of instrumental divination, a recent (2011) study of Gouchou et al. provides evidence for information retrieval by use of a typical divinatory device (a Ouija board), which supports the proposal that ideomotor actions (behaviours that are unconsciously initiated and express a thought rather than a response to a sensory stimulus) "can express information that cannot be consciously accessed."[54]

Divination is generally considered to be rooted in the theory of correspondences.[55] Theory of correspondences may be defined as "the assumption that the world has been created in such way that resemblances are the reflection of real connections."[56] The idea that "reality consists of multiple 'levels' which in some manner mirror another," is extremely widespread in all traditional cultures.[57] In modern Western thought many instances of theory of correspondences can be found, most notably in Hermetic traditions, vividly represented for example in the New Age religion of the 20th and 21st century.[58] The theory of correspondences has hardly survived in scientific thought since the Enlightment, yet the application of theory of correspondences in divination can be classified as science "on the grounds that some characteristics of science are considered to be continuous over the course of history, even while its content or aim is discontinuous."[59] A profound continuous characteristic of science is the attribution of meaning to chance phenomena. Chance is central[60] in divinatory foretelling practice since 2500 BC,[61] and still is central in statistical prognosis and modeling as applied in thermodynamics, life sciences, quantum physics, psychology, social studies, etc.[62] Not only in research fields facing chaotic or random patterns in life and matter are statistics crucial for evaluation, modeling and predicting; *all* laws of physics can be explained as statistical laws, including the laws of classical mechanics.[63] This is to say that the past millennia have provided for a vast body of literature on the interpretation of chance, indeed with a variety of 'contents or aims,' that is nevertheless remarkably consistent and continuous in terms of the relation between man and the indeterminate aspects of nature.

A debatable[64] but persistent lay representation of Western scientific history is that physical laws of nature gradually replaced the 'spiritual' interpretations of chance phenomena. In this extremely simplified representation of history, a significant swap in the interpretation of chance is evident: starting from an interpretation of chance phenomena as signs from controlling and creative forces (mostly attributed to a single God or multiple deities[65]), chance and coincidence became increasingly seen as the originating source of creation.[66] The increasing accuracy of statistical measures and cumulative predictability of chance phenomena in the physical world armed man in the course of history with rising control and creative power over nature.[67] Whilst chance is a continuous challenge for humanity, in particular for those whom we call scientists,[68] the 'contents and aims' of the application of chance phenomena have shifted from 'metaphysical conjecture' towards an inquiry that is almost exclusively directed to the physical world in modern scientific thought.[69] Chance, in its most extreme different interpretations, has been considered in human thought as communicator of supernatural creative powers on the one side, and as the originating source of creation[70] on the opposite side. Instrumental divination, in *its practice,* does not debate either interpretation; it may encompass the total range of chance phenomena; it also may include previously obtained knowledge of any kind as useful information or common sense factor. Thus, applied in our contemporary framework, I suggest defining the domain of the divinatory act of inquiry as encompassing a universe that cannot be forecast by previously obtained knowledge or reason *alone*. To me, the domain of divinatory inquiry includes all phenomena that still remain undetermined by science, and which, as such, include all events commonly considered as due to chance. This is not to say that science is divination and vice-versa, but it must be noted that both kinds of inquiry – the scientific and divinatory – implicitly deal with chance. The divinatory act intersects with scientific progress and vice-versa, but the divinatory praxis returns a realm of meaning other than that with which Western 'normal science'[71] is concerned. Divination searches for 'morally' meaningful directives concerning social, political, health, and spiritual issues. As such, divination and metaphysical conjecture have some strikingly similarities with respect to their search for meaning beyond what reason and knowledge can provide for on their own. Unlike metaphysics, however, divination is not a purely abstract search for knowledge, but includes a performative praxis as well, directly concerned with a broad spectrum of cultural issues.[72] ISMF can be understood as a contemporary divinatory practice, using advanced technology to produce 'revealing' chance (see also next section), combined with a 'therapeutic' kind of praxis. The main difference between ISMF and regular divination praxis is that the client performs his or hers 'own divination,'[73] and the sole role of the therapist is to guide the process.

Synchronicity, revelation and ISMF

Synchronicity is a modern differentiation of the obsolete concept of correspondence in which divination is rooted.[74] Synchronicity is typically defined as two or more events occurring at the same time in a meaningful and non-causal manner.[75] In synchronistic events, meaning and randomness relate to each other by means of an acausal connecting principle. To Jung, "scientific coincidence does not provide support for the presumption that from pure coincidence higher syntheses – such as the psyche – might arise, we need a hypothesis of a latent meaningfulness; not only to describe and explain the synchronistic phenomena, but also the higher syntheses. (...) Meaningfulness always seems initially to be unconscious, and therefore can only be discovered afterwards. (...) We need the synchronistic experience, for the foundation of the hypothesis of a latent meaningfulness, which is independent of consciousness."[76] Synchronistic events furthermore are meaningful in the way in which they reveal information or reveal a new way of understanding that was not known before and could not be revealed in other ways. To Jung, synchronicities can be thought of as plain coincidence, but if the number of meaningful coincidences increases, and their correspondence become more precise, they can no longer be regarded as pure coincidence, and must be conceived as being regulated according to a certain unknown design, by lack of causal explanation. The lack of accountability does not consist solely in the fact that the origin is unknown, but also in the fact that such explanation cannot be conceived within the limits of our reason.[77]

In a study on Jung's ideas on synchronicity, Roderick Main points to a number of dimensions of *spontaneous* synchronicities: numinosity, miraculousness, transformation, unity, and revelation.[78] Concerning the latter, synchronicity can be related to the conception of revelation, because synchronistic events can be seen as a form of higher-level communication to human consciousness.[79] For the individual experiencer, a series of synchronistic events might make up a form of 'revelation history.'[80]

If it is plausible that synchronistic events can be induced by artificially produced randomness – which is clearly part of many artificial divination procedures – listening to real-time generated ISMF music may stimulate *non-spontaneous* synchronistic events: artificially generated indeterminate music and its invoked experiences may coincide in a meaningful and acausal manner (i.e. an anomalous psychokinetic bond of the listener with the ISMF instrument). Because ISMF exposes listeners to a *continuous* feed of random stimuli, this may even result in *series* of synchronicities, which could construct a synchronicity narrative in a relatively short time, similar to the above-mentioned revelation history. As we will see affirmed later in the case study examples, the contents of the narrative that "emerge through synchronicity are, or can readily be resolved into, images and ideas. (…) The images and ideas involved are often symbolic in character,"[81] which kind of expression is "the best possible formulation of a relatively *unknown* thing."[82] Avery Dulles describes a symbol as a sign that contains a plenitude of evoked rather than stated meaning, which has the ability to generate new awareness, not normally accessible through to discursive thought.[83]

Therapeutic intervention method

With the above-mentioned theoretical aspects in mind, an interview method has been developed for therapeutic use of ISMF. This method has been developed in close cooperation with a registered healthcare psychologist. In the method we developed, an 'IMSF session' is divided into three subsequent sections:

- Intake interview
- ISMF music session
- Evaluation interview

Central to the interview technique is that the therapist does not add *any* information to the story of the client during the intake and evaluation. The therapist is assumed to act as a blank screen, disclosing as little as possible about his or her personal, ideological, or professional background. Ideally, information exchanged or asked for by the therapist during the interview portions of the ISMF session is expressed in the same vocabulary as that used by the client. This way it is ensured that narratives reported by the client remain as pure as possible; the narrative of the client is as indeterminate as the ISMF music is, and is not guided by information brought in by the therapist. Information given by the client, specifically during the evaluation, is repeated frequently by the therapist. This is to imprint the most meaningful experiences in memory, so they can be more easily recollected after the ISMF session.

Included in the idea that no information is added by the therapist, is that the therapist does not make a diagnosis and/or suggestion for future treatment. Also the therapist does not interpret reported experiences. The general purpose of an IMSF session is that the client comes to deeper insight concerning a problem or question purely on his or her own effort.

Intake

Each ISMF session starts with an intake interview. During the first minutes of the intake, the client is asked to fill in a short questionnaire, in order to let the client focus on the reason of his or her visit. The last and central question of the questionnaire is: "Are you about to make important decisions?" This question has proved to be a good starting point for ISMF intakes. Although it is not necessarily explained to the client this way, during the intake session one tries to examine the client's problem or question to the point where the client feels unable to solve the question or problem by reason alone (i.e. questions of a moral nature, questions about life and death, and other kinds of metaphysical questions), or where the client feels incapable of making fruitful or just decisions in emotional or rational issues (conflicts). This is because there are reasons to assume that meaningful synchronistic events, cross-border experiences, and psychic experiences, most often occur when all other means, including 'pure' reason, are fully exercised, but have failed thus far.[84] As we have already seen, such experiences are typically described as revealing insights in a way not accessible by reason alone.[85] The therapist does not force, or 'invite' the client to raise such questions beyond the scope of reason, however, for the therapist does not add information, nor is information given by the client driven in certain directions. If 'big questions' play no part during the intake, they should not be sought after.[86]

Music session

After the intake (in which a problem, question or difficult decision may be defined, or not) the client is asked to lie down on a comfortable treatment table and to put on the headphones. The client is asked to listen to the music with closed eyes, and told that he or she will listen to unpredictable music for about 20 minutes. It is explained to the client that he or she listens to the music alone (the therapist does not listen to the music), that the music has never been heard before, that no recordings will be made, and that the music is generated at the same moment that he or she is listening. The client is told that experiences such as imagery, thoughts, recollections, and dreams may arise during the music session, and that these will be discussed after the music session. There are no other things added to the preparation of the music session, such as "you should relax," or "stay focused," or "let go." Because the client listens alone to the music, the therapist leaves the treatment while the music plays. Typically the treatment room is designed in such a way that the therapist can start the music session in another room. The ISFM music session can be started and can be adjusted to the desired length by the ISMF control panel software.

Evaluation

Immediately after the music session, the client is asked to write down the experiences gained whilst listening to the music. When the client writes down the experiences (which takes about 3-5 minutes), the therapist again leaves the room. As with normal dreams, gained experiences may easily be forgotten very quickly after the music session has stopped. Therefore, during the first few minutes of the evaluation interview the therapist tries to grasp a general idea about the experiences that took place whilst the client was listening to the music.

During the evaluation interview the narrative of the client is central. As a means of getting as detailed a narrative as possible thereafter, the therapist and client try to put the reported experiences in chronological order. Also, the client is frequently asked if he or she may have forgotten to mention particular experiences. During the first phase of the evaluation interview, care is given that only experiences during the music session are included in the narrative; other recollections and rationalizations are rejected from the story.

In the case studies summarized later in this article, special attention is given to anomalous and exceptional experiences[87] during the evaluating conversation, because these may contain information or insights that may not have been possible for the client to retrieve earlier by reason alone. Information given by the client, specifically the most meaningful experiences, is repeated frequently by the therapist. This repetition is meant to imprint the experience in memory, and is performed at the same time as therapist and client try to arrange the experiences that occurred during the music session in chronological order. This way, special emphasis is given to the experiential realm of the client. As a result of the imprint, meaningful insights, imagery and such, are more likely to be aptly recollected by the client after the ISMF session.

The evaluation interview is closed by a discussion – if not already done so – about whether and how the reported experiences are connected in a meaningful way to the question, problem, or important decision expressed during the intake.

Case studies

Between 2008 and 2013 several case studies were collected. The first cases were informal meetings with people who were 'just' interested in ISMF. In general, listeners reported deep relaxation in a short time. Dream-like images, visions, voices and ideas were experienced, most of them connected in a remarkably meaningful way to important issues in the individuals' life, especially in cases where listeners had also reported that they were facing problems or difficult decisions. This was first noticed in 2008, when a woman (Ines) visited the former laboratory and 'atelier' of Iebele Abel, because she believed that this kind of music might have healing qualities in her situation. This is the "Ines" story, summarized:

A man called me (Iebele Abel), someone I had met a few months earlier. I had told the man about my experiments with ISMF. The man explained to me that his partner, Ines, had felt severely ill for about half a year. The man and his partner thought that ISMF music might heal Ines, because they "believed that Ines lost connection with the all permeating field of cosmic energy." The man asked me if Ines could visit me. We made an appointment.

Ines visited my studio about one week later. She told me her energy level is zero. She had pains in her stomach and ovaries. She heard a buzz in her ears, every day. She felt very emotional and sensitive. Inez said that she was oversensitive to perfumes, and other artificial smells. She felt sad, unstable, angry, tired, and tense. She could not swallow sometimes. She had a dry throat, had difficulties in expressing herself, could not find the proper words in conversations as she was used to. She felt she was always too kind to others. She reported having a fear of expressing herself, even of existing sometimes. She always felt tormented by thoughts; she was unable to find moments of relaxation during the day. She was trying to find a new job. She was currently working in a prison.

During the music session Ines first experienced her tormenting thoughts, but they did disappear after a while. Her body relaxed. For a moment she experienced swimming with dolphins. She experienced relaxation, and for a while, her body felt very light. Then she did not feel bodily sensations at all. When Ines left my studio, she said that she wanted to visit me again later, to do another session.

Six weeks later I received an email. Ines wrote that the next day after her visit the buzz in her ears had disappeared for three days. It did return afterwards, but much less frequently and intense. She asked for a second session. During the second intake Ines told me that she had stopped working in the prison. She wanted to do a new session for relaxation, to ease her thoughts, which were still raging sometimes.

During the second music session Ines saw images of the dolphin again. She saw the sun, and then a flower petal with a drop of water. Then she saw her horse, Bianca, that she used to care for during her youth. The image of her horse made her sad; she missed him. Then the horse got wings and Ines and her horse started flying, together, as if they were riding. They flew higher and higher, through the clouds, and through the stars. At once this vision stopped. Ines saw fragments of images, like a movie. First the fragments were nice, but at the end the fragments were horrifying.

After the music session Ines told me that it must have been 5 years ago that she last dreamt about flying, something she did frequently before. The image of her horse "made her aware of the kind of person she really was, which she had forgotten during maturation. I want to be that kind of a person again." She told me that the image of her horse and the recollection of how she felt in her youth may help her to rebuild such an attitude and surroundings (nature, animals) in her future life.

About 5 months later Ines sent me an email. She was expecting a child. She and her partner had moved from a city in the Netherlands to the countryside somewhere in Germany. She told me she was "completely fixed," also the buzz in her ear disappeared completely. According to her, the sessions had helped her to find her new way of living. When the baby was born I got a postcard with a photograph of the family attached.

This case was the first in which a connection was made between a problematic situation and therapeutic use of ISMF music. Since then, the artistic experiments in my studio were discontinued,[88] and only 'formal' cases were performed, which meant that only people with a clear "request for help" were met. Only these cases are summarized in this document. Between 2008 and 2013, 18 people of different nationalities attended an ISMF session. The sessions were held in the Netherlands and Greece. In most cases only one ISMF session was performed.

To each client it was explained that ISMF was an artistic means to enhance inner imagination. Also it was made clear that ISMF was not a scientifically evaluated psychological and/or medical treatment. Clients were asked to sign a disclaimer.

The texts below summarize four examples of what the clients reported during the intake interviews, music sessions, and the evaluation interviews. More, and some more elaborate, examples can be found as ICRL Technical Report 13.002, published in May 2013. The names of the clients are changed, for obvious reasons of privacy.

Case 09L14 (2009).
Sandra, Dutch woman, 28 years (1 session). Education: Graduate.

> *Before music session*: Sandra's grandmother passed away one year ago. Her (severe) mourning has made her contemplate questions about the mortality of the human soul. Sandra recognizes that her thoughts about life and death have become "very rational and metaphysical" after the loss of her grandmother. Sandra has worked as an energetic therapist for many years, but since her rational thoughts have subdued her emotions and sensitivity to others, she feels less capable to continue her work as energetic therapist. To Sandra it has become unclear what "healing can possibly mean to beings that are mortal anyways."
> *During music session*: During the music sessions Sandra saw a clear image of grandmother, as if "she was really there." Her grandmother "radiated an unbelievable amount of love." The vision of her grandmother was like a "living image." Sandra had strong emotional feelings thereafter.
> *After music session*: Sandra tells she had no vision or visible recollection of her grandmother after her death. Her grandmother was, so to say, "really gone." The living image Sandra had witnessed during the music session, had "finally re-evoked emotion instead of rationality after so many months." When I meet Sandra a few weeks later, she says that she was now able to continue her work as a therapist again.

Case 10C18 (2010).
Kees, Dutch man, 33 years (1 session). Education: Undergraduate.

> *Before music session*: Kees visits a psychologist because he had suffered from sudden and increasingly violent behavior that started about two years back. Ultimately he had smashed his own house to smithereens. Also he had hit his current girlfriend. He regrets his violence deeply, and does not understand what the source of that behavior is. His normal attitude has always been stable, enthusiastic, mild and friendly. After his violent explosions, he lost his feeling of having an identity. He wants to get back his real, own identity.
> *During music session*: The first few minutes Kees had floating and spinning sensations, combined with alternating relaxed and stressed feelings. Also the feelings of violent rage appeared. Kees had very "imaginative thoughts," but these, he said, were normal to him. Kees distinguished uplifting parts in the music during which he felt revived, and negative, heavy parts that made him feel small and shrunken.
> *After music session*: It was hard for Kees to value his experiences during the music session, but when we focused on the very last minutes of the music, Kees recollects he had a vision in which he was running away from something. The speed of running made him float, which was to him an escape from some unknown danger. Then his body was uplifted and he pivoted around the middle of his body. Thereafter he sees himself laying on a stone table, situated in the middle of a large, open green field in a forest. It is daytime. Kees noticed that he lies down with his arms spread. He feels safe and secure that way. That feeling of safety is, when Kees recollects it, new to him. He thinks that the image of laying down with his arms spread may help him when he is about to get aggressive again.

Case 12L22 (2012)
Christina, Greek woman, 52 years (1 session). Education: Graduate.

> *Before music session*: Christina expects that ISMF will help her to "balance her body and mind." She is in need for that because she is highly frustrated and very sad about family issues that reached a climax recently. For four years, her husband and family practically and emotionally excluded Christina from the education of her son. For years, she worried about him because he used – and still uses - anabolic

steroids. Her husband and family have always ignored these concerns. They always spoiled him excessively, for example by giving him much money to support his nightlife, also during normal schooldays. The son is now almost twenty and suffers from a severe liver disease due to the use of the anabolic steroids. The family and husband do not want to move him to practice a healthier lifestyle. Also, they don't want to listen to Christina's advice, and keep spoiling her son. Christina is very sad, frustrated, and desperate about what to do. She fears for the life of her son.
During music session: The first thing Christina experienced was a "wake-up call." She felt that she was removed from a situation of sleep. Also she felt a kind of threat. A voice said to her verbatim: "Wake up and do something!" Immediately thereafter Christina had the thought that she should go to see her husband and son in Athens, within the next few days. At that moment Christina felt very strong and clear. "I understood that I – in the same powerful mood as evoked by the music - would *and could* explain what is important for my son, and how we, my husband, family and myself, should assist him." Then Christina had a nice recollection of the time with her son when he was young, swimming in the sea as they used to do frequently. Those images made her cry, because "they were such great memories." Thereafter Christina had a feeling of pain relief. This pain relief she knows from the time she took medication for menstrual problems, a very pleasant, sleepy feeling. At the end the music sounded "happy", which gave Christina a sense of optimism.
After music session: After listening to the ISMF music, Christina reports she feels much stronger and powerful. The role she has to fulfill as mother has become clear to her. She decides to go visit her son and her husband in Athens, to convince them that they should stop denying the serious situation to which her son has arrived. Christina is determined not to act emotional and weak anymore, but to do exactly what she is convinced she has to do as a mother. To her, the music session had helped her to clarify her confusion.

Case 12K16 (2012)
Ellen, Dutch woman, 54 years (1 session). Education: Undergraduate.

Before music session: After raising her four children (her youngest daughter is now 16), Ellen wants to find her "own calling" or "own profession." She wants to do something with Chineng Qigong, music and (bodily) movement. Currently she attends graduate school to become a child therapist, but she still has a few courses to complete. The hardest part of the program for her to finish is clinical diagnosis, which part is too oriented on Western medicine, for Ellen. One of her daughters, now 22, was diagnosed as schizophrenic and multiple personality disorder when she was 9. This diagnosis was a huge shock for Ellen at that time. By chance she met a psychologist who looked at her daughter from another perspective. According to him, her daughter had troubles with high sensitivity (not in a 'disordered' way). The situation with her daughter remained difficult for a long time, but the contact with this psychologist was an important support for the whole family. Currently Ellen's daughter is doing well. Ellen does not talk to everyone (but to some people she does) about the beliefs and attitudes that she has developed in her life. In particular, her father is not with her. The way Ellen copes with her daughter does not have the approval of her father, who feels that her daughter should be treated by means of medication, in a typical Western way. Regarding her work, Ellen would like to work with people. Should she fail in the program for child therapist - Ellen thinks she needs such a diploma in her future work - she considers doing something with ICT. She certainly wants to work with people, preferably in a coaching way. Ellen has previously experienced an ISMF session during a group meeting. Ellen considers using ISMF in her future practice. She therefore wants to experience an individual ISMF session.
During music session (mixed with after music session): Ellen reports that the general trend in the music was that it became brighter and more cheerful after a time; hard and low notes were played less frequently gradually. The music gave her "the message" to "follow" the bright and cheerful parts of the music. The music made her feel that her future work is ("will be") related to Chineng Qigong and music therapy. Furthermore, the music made her convinced that she should not to be stopped by the establishment ("Western science") or by her father.
Ellen experienced the "hard basses" in the music as symbolizing something that was slowing her down her career, as if they symbolized her father's opinion and/or her training as child therapist. The lighter parts of the music symbolized for her a kind of message to "follow her heart." Ellen noticed that she "fell back" each time she heard the low notes again, which did "punish" her. This meaning of

"punishment" attached to the basses in the music was confirmed to Ellen, when she, at one point, thought about her father's opinion and her training, and *just after that* she heard the low notes again. This was, to her, a second confirmation that she should not withdraw from her intuitively just decisions in her life, because of her father's judgments or "Western" education in general. Ellen thereafter again experienced bright and cheerful music, all the time that her thoughts followed her heart. At the end of the music session Ellen "knows for sure" that she has to follow her heart. Ellen stresses that this was to her a remarkably touching "knowing to know." She says she has had the experience of 'knowing with absolute certainty' only a few number of times in her life, so she could easily distinguish the value of her certainty from having "just an idea." The fact that she had this thought ("I have to follow my heart") at the same moment the music stopped, was a third confirmation to Ellen that she should value this thought as "true information." When I ask Ellen what she will actually do when she follows her heart, she answers: "This, what we've done now."
After music session: Ellen is currently in the process of setting up a practice in which she uses ISMF music, combined with several studies in alternative medicine.

Case 12G08 (2012).
Titia. Greek woman, 53 years (1 session). Education: Graduate.

Before music session: Though feeling stable and successful in life, Titia feels suppressed by "evil energy." She does not want (in general) to talk about her emotions. She shares that she had a serious accident in her past, and she often feels sad because her daughter does not live with her.
During music session: The sequence of experiences starts with an image of a cross, made of steel with a green emerald attached. Then she sees an image of a dull, ancient vase. She sees two times two different empty beaches from bird-eye view, both looking like made of enamel (instead of sand). The first beach was completely empty; the second had some chairs, but there were no people. Then she sees the image of a smiling masked (silver mask) man, followed by an image of Holy Mary, only in contours, which worries her. After that she "is touched by an energy," which is extremely frightening to her. Thereafter she sees an image of a black bracelet with magic signs around her wrist. The bracelet turns into a turquoise colour, which she likes very much. Then the bracelet turns into an airy material, which remind her of coral. The changing image of the bracelet is, in connection with the other imagery a "healing and deeply relieving experience" to Titia.
After music session: Titia reveals that she had a suicide attempt 11 years ago without knowing the reason herself. Since then she is not allowed to raise her children (by law). She recollects during the evaluation that 11 years ago "an evil energy" entered her body just before she fell asleep, at the same place (wrist) where the bracelet was placed in her vision. A few days later she jumped from her balcony at night, whilst hearing a loud noise, seemingly unable to control herself. She has never told this story (about the "evil energy" connected with hearing the loud noise, which "forced" her suicide attempt) to anybody before. This "evil power" never really disappeared, but it departed during the visions she had whilst listening to the music; this was especially noted when she witnessed the changing colour and material of the bracelet. The departure of evil power feels permanent to her. Titia wants to close the session with prayer, to ask for a permanent departure of the evil energy.

This article is about the possible therapeutic use of ISMF. Among the many ISMF sessions held with individuals and groups, only 19 had the characteristics of individual therapeutic intervention, in the sense that in these cases the client had requested outside help, the intervention was purposeful, and the intervention was carried out in a therapist-client relationship.[89] In 18 out of 19 of these cases clients reported that the ISMF session was helpful, to various degrees. Sessions held by two other therapists who work with ISMF are not included, as they did not keep clear records of their sessions and client reports. Both therapists did, however, report one case of (unchecked) clairvoyant imagery, and some other meaningful experiences. Also, various experimental group sessions (with about 1600 listeners in total, and about 400 written individual reports), performed during conference lectures about ISMF and art shows are excluded from this article, although it is worth mentioning that some remarkable experiences were reported during these group sessions as well. Specifically, feelings of

enhanced interconnectedness ('oneness'), dream-like experiences with symbolic content, relaxation, and emotional recollections (both negative and positive) were reported.

Music by Divination Project

As a special case in which individual reports were collected, here is a summary about an event organized during the "World Day of Interconnectedness 2010." On October 10, 2010, a 24-hour worldwide Internet broadcast of real-time generated ISMF music was organized. Instead of ISMF, the project was called "Music by Divination" at the time.

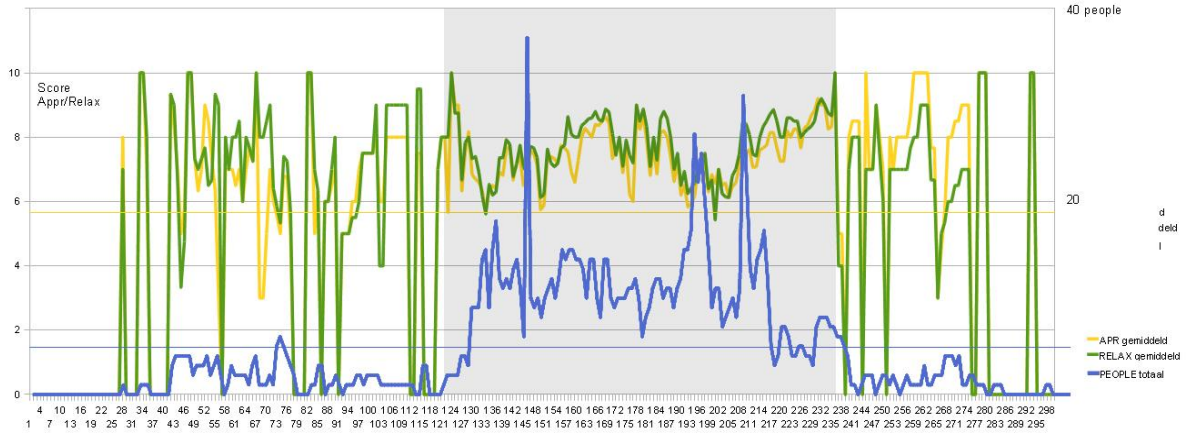
One day before the project started broadcasting, a few individuals and organizations "marketed" the event using mailing lists and Facebook. People were invited to listen to ISMF music via an Internet portal, using an easy-to-use Internet application. This resulted in over 1100 visitors. About 900 visitors were able to listen to the music; about 200 visitors had technical problems with their Internet connection and/or computer audio setup. 346 listeners responded to the request to fill in an Internet form after they stopped listening to the music[90]. This form asked for:

- Appreciation [1-10]
- Relaxation [1-10]
- Message [free text]

The duration of listening was measured automatically for each individual.

The statistics performed on the data provided by the 346 respondents showed that 20% rated their appreciation of the music with the highest value of 10 (they liked it very much). 5% rated the music with the lowest value of 1 (they did not like it at all). Most respondents (21%) rated their experience of appreciation and relaxation with an 8. The average rating was 7.2. Some respondents listened for a few minutes, some listened for as long as 10 hours without a break.

The scores of relaxation, appreciation (green/yellow) and the number of listeners at the same time (blue), are provided in the timeline table below.



Possible anomalous correlation (mirroring) was found between number of listeners (blue) and appreciation/relaxation scores (yellow/green):

- Number of people vs. relaxation: +0.059 (not significant)
- Number of people vs. appreciation: - 0.156 (significant: p=0.02*)

Dick Bierman, who performed the statistics on the collected data, found that the significant correlation (p=0.02) disappears when day/night factors were included in the statistics for time zone GMT+1.

Perhaps more important than these numbers, almost every respondent also wrote a short free text message, most of them being open-hearted expressions of deep and meaningful experiences. Summarizing the free texts send by the respondents, we concluded that:

- Respondents described experiences ranging from deep sadness to heavenly joy.
- Combined feelings of joy and sadness, connectedness and separation, pain and relief, freedom and restriction, life and death, etc., were experienced.
- Descriptions of emotional movements were reported, which seem to evoke unique subjective imagery in some cases.
- The experience was indicated as uplifting in most cases.

As an example of the free text messages received by the listeners, the text below shows a remarkable and poetically expressed set of visions and thoughts that were gained while listening to the music. This text was sent to all respondents a few months after the event itself, because it represents and summarizes other messages pretty well:

"I lean back in my chair and listen.
I have had bio-feedback training to deal with pain.
I think this aided me to visualize.
These are my thoughts:

Slowing down. Relaxed and floating.
Giving in to a deeper part of me.

I am a seed from a cottonwood tree.
Safe and nurtured, but restricted.
Surrounded by many others just the same.
Then it changes with the 'popping' of the pod and the 'wafting' of a breeze.

I am free. But the knowing is part of me.
Once I touch the earth, my roots will reach out
and grasp what will be my forever home.
Even though I may grow into something strong and beautiful,
with branches that can wave at the stars,
I will never again be free.
This is my moment to fly in the wind.
To dance in the sun.
Journey as far as I can.

Free. Glorious freedom."

Discussion

It cannot be stressed enough that ISMF had initially been developed as an artistic means to stimulate the inner imagination. I have presented the design of the ISMF instrument, some theoretical aspects, and summarized reports of case studies. I have presented the materials this way as a starting point for further studies and observations. From an artistic view, it may be concluded that ISMF evokes a huge variety of experiences in the listener, and that these experiences are purely elicited – not in any way conveyed by me as an artist. I actually had to exclude my own artistic preferences completely from the design of the ISMF instrument, in order to arrive at the maximum of uniqueness and subjectivity in the experience of the listener. This approach seems successful. ISMF, as a work of art, seems to evoke highly subjective and meaningful imagery in the listener, which in most cases is experienced as uplifting.

Case studies with individuals and groups have been conducted to investigate what kinds of experiences are gained when people listen to ISMF music. Frequently reported states of relaxation, exceptional and sometimes transboundary experiences, close connection with emotional states and daily issues, rich and meaningful inner imagery, and relief of sorrow in general, have broadened the application of ISMF from arts to healing. For some therapists, coaches, and those who work with people in other ways, the reported experiences make plausible the use of ISMF as a viable therapeutic intervention method. Concerning the curative properties of ISMF, more research is required to meet the demands of professional healthcare psychologists and psychiatrists. Specifically, future studies should point out which complaints and disorders ISMF can be used for, possible risks should be analyzed (epilepsy, psychosis, etc.), and the results of ISMF sessions in the long and short term should be assessed. Case studies to date did not make use of certified questionnaires (such as the Symptom Checklist SCL-90). Now that ISMF is made accessible since January 2013 for therapists, researchers from all over the world can perform psychological research. Specialists from relevant scientific disciplines are invited to confer in more detail about the therapeutic use of ISMF.

This article mainly focuses on the psychic aspects of ISMF related to therapeutic use. Future research may point to certain observations of physiological, biological, or neurological nature. However, to me as an artist, expressions of the spiritual rather than the material nature of man are central. Following that fascination, I have collected a number of theoretical aspects that in my view relate to the exceptional and sometimes trans-boundary experiences that are reported by listeners to ISMF music. Aspects of nonlocality, divination, synchronicity, anomalous mind-machine interaction, and subtle psychic experiences were found in many of these reports. The presented literature findings suggest that these reports may be seen as representative for human spiritual experience in general. On an empirical and theoretical basis, there is evidence that indeterminate processes outside of the body have found applications in cases involving decision-making and health – at least at, but not limited to, the level of spirituality – from ancient history until the present day. The observation that experiences while listening to indeterminate music seem most elaborate and *useful* in cases in which people have questions or problems that cannot be resolved discursively, is also found in literature concerned with divinatory practice, synchronistic phenomena, and nonlocal healing modalities. The materials collected in this article are far from exhaustive, but they do point to a thus far easily overseen applicability of laboratory micro- PK instruments and methods: ISMF as an *instrumental* application of nonlocal and anomalous phenomena in a therapeutic context is – specifically with respect to the instrumental aspect – an obvious yet almost unexplored potential of contemporary psychic research and practice.

Three final remarks. First, the cases summarized in this article have all been conducted by myself. The role of the experimenter in psychic research cannot be neglected.[91] When other people conduct ISMF sessions, the results may differ. Future research with different therapists from different professional backgrounds may shed more light on the role of therapist, client and the ISMF intervention.

Second, cross-border experiences may foster severe psychological problems or trauma.[92] ISMF should therefore be used with care. By no means is ISMF meant to be used to force such things commonly denoted as 'spiritual awakening'. Also, I strongly advise against the use of ISMF in situations in which psychiatric pathology is observed, unless this is done under appropriate medical guidance. ISMF is intended as a supportive means to make the mind receptive to the subtle guidance of that particular intuitive kind of information, which we cannot access by rational thought alone. Practical application of ISMF may, at least for that reason, remain more of an art than a science.

Finally, I have presented ISMF as an instrument that might be useful for therapeutic purposes. This document would not be complete, however, without some words about the sources of inspiration that made me develop ISMF, which are not limited to individual therapeutic use. In fact, the possible therapeutic value of ISMF was only noticed after the instrument was used in artistic practice. The ISMF instrument was designed as an artistic means to explore the experiential realm beyond the borders of the physical world, in a social context in which technological and scientific thought seem increasingly dominant over, and even may dim, the evident huge variety of other human experiences; experiences that may transcend time, space and causality, blurring the boundaries between imagination and reality, waking and dreaming, or life and death. Such 'psychic' experiences may have contributed to the moral nature of man. Whether these experiences may disturb us or not, whether they display our genius or lunacy, they do "express the fact that the disturbance is a systematic re-adjustment with a view to equilibrium on a higher level: (…) a concentration of the soul awaiting transformation."[93] The artistic nature of ISMF allows for the paradox that ISMF, as an artistic enterprise, makes

intentional use of contemporary technology in order to escape from the technological, mechanistic, and indeed sometimes *robotic* spirit of Western civilization. The inspiration to construct a device like ISMF is rooted in the observation that he 'body' of science and technology has grown, whilst, in the famous words of Henri Bergson, "in this body, distended out of all proportion, the soul remains what it was, too small to fill it, too weak to guide it. (…) What we need are new reserves of potential energy – moral energy this time. (…) The origins of the process of mechanization are indeed more mystical than we might imagine. Machinery will find its true vocation again, it will render services in proportion of its power, only if mankind, which it had bowed still lower to the earth, can succeed, through it, in standing erect and looking heavenwards."[94]

For more information about how to obtain access to ISMF music see: ismf.publicmedia.nl

NOTES AND REFERENCES

[1] William James (1902). *The Varieties of Religious Experience*. Routledge, 2008, p. 240.
[2] Iebele Abel (2010). Informationele Technologie in Therapeutische Context. *Tijdschrift voor Parapsychology en Bewustzijnsonderzoek*, no. 1, 2010, pp. 21-24. (Informational Technology in Therapeutic Contexts, *Dutch Journal for Parapsychology and Consciousness Research*).
[3] Martin Wuttke (1992). Addiction, Awakening, and EEG Biofeedback*, Biofeedback*, Vol. 20, No. 2, June 1992.
[4] The used REG is the Quantum Random Number Generator, developed by idQuantique, Switzerland. This REG is based on counting reflection and transmittance of photons on a semitransparent mirror.
[5] The artistic and philosophical aspects of this project are discussed in detail in Iebele Abel (2009, 2013), *Manifestations of Mind in Matter. Conversations about Art, Science, and Spirit*. Princeton: ICRL Press.
[6] W. Braud, & M. Schlitz (1983), Psychokinetic influence on electrodermal activity. *Journal of Parapsychology*, 47, 1983, pp. 95-119.
[7] The author has not checked reports of clairvoyance.
[8] David M. Wulff (2001). *Varieties of Anomalous Experiences: Examining the Scientific Evidence*, ed. Etzel Cardeña, Steven Jay Lynn, and Stanley Krippner. Washington D.C.: American Psychological Associationp, p. 413.
[9] In "A world with retroactive causation" Dick Bierman (*Systematic*a, 1988, Vol 7, 1-7,) argues that there is empirical evidence that effects can precede causes.
See also: Dick Bierman & Dean Radin (2000), Anomalous unconscious emotional responses: Evidence for a reversal of the arrow of time, *Towards a science of consciousness III: The Third Tucson Discussions and Debates*, (ed. S. Hameroff, A. Kaszniak, & D. Chalmers). Boston, MA: MIT Press.
[10] Garret Moddel, Zixu Zhu and Adam M. Curry, Laboratory Demonstration of Retroactive Influence in a Digital System, *AIP Conference Proceedings,* 1408, pp. 218-231.
[11] James Pritchett (1993). *The Music of John Cage*. Music in the 20th Century. Cambridge, New York, Melbourne: Cambridge University Press. p. 108.
[12] Daryl Bem (2010). Feeling the Future: Experimental Evidence for Anomalous Retroactive Influences on Cognition and Affect, *Journal of Personality and Social Psychology*, Vol. 100(3), 2010, p. 407.
[13] Annemiek Vink (2001), Music and Emotion, *Nordic Journal of Music Therapy*, 10:2, 2001, p. 145.
[14] There are however indications that music is an effective means for 'mood induction' and 'mood manipulation.' See for references: Marcel Zentner et al. (2008), Emotions Evoked by the Sound of Music: Characterization, Classification, and Measurement, *Emotions*, Vol. 8, No. 4, 2008, p. 494.
[15] See chapter 3 of Kenneth E. Bruscia (1998), *Defining Music Therapy*. *Second Edition*. Barcelona Publishers (USA).
[16] Annemiek Vink (2001), Music and Emotion, *Nordic Journal of Music Therapy*, 10:2, 2001, p. 150.
[17] There are, on the other hand, studies out of the scope of this article that point to the physical basis of intentional healing systems targeted on the physiology of the body, which do relate to ISMF. In a general form Roger Nelson describes this physical basis as: "When there is a disruption, and healing is required, the need is for additional order, the infusion of information." See: Roger Nelson (1999), *The Physical Basis of Intentional Healing Systems*, PEAR Techical Note 99001, January 1999.
[18] Leonard B. Meyer (1956). *Emotion and Meaning in Music*. The University of Chicago Press, pp. 6-7.
[19] For therapeutic use, "associative texts" concerning ISMF should therefore be used with caution, because "associative text" or any kind of interpretation related to the ISMF instrument and the music it produces, would infringe its 'pure' nature.
[20] Stephen Davies (2006). Artistic Expression and the Hard Case of Pure Music, *Contemporary Debates in Aesthetics and the Philosophy of Art,* ed. Matthew Kieran. Blackwell Publishing, 2006, pp. 177-179.
[21] Partik Juslin and John Sloboda (2013), *Psychology of Music* (ed. Diana Deutsch), Academic Press (Elsevier), 2013, pp. 583-632.
[22] As an example of (partly) *conveyed* emotion (as opposite to *elicited* emotion) used in therapeutic settings I quote from an article about Helen L. Bonny's Guided Imagery and Music psychotherapy: "… the music therapist assesses the current emotional state of the client, and then chooses a classical music program which will first match that state in sound." See: Lisa Summer (1992), Music: The Aesthetic Elixir, *Journal of the Association for Music and Imagery, 1*(1), 1992.
[23] Marcel Zentner et al (2008), Emotions Evoked by the Sound of Music: Characterization, Classification, and Measurement, Emotions, 2008, Vol. 8, No. 4, 2008, p. 514.
[24] Marcel Zentner et al (2008), Emotions Evoked by the Sound of Music: Characterization, Classification, and Measurement, Emotions, 2008, Vol. 8, No. 4, 2008, p. 515.
[25] Thomas Hillecke; Anne Nickel; Bolay, Hans Volker Bolay (2005), Scientific perspectives on music therapy, *Annals of the New York Academy of Sciences*, Vol.1060, 2005, p. 276.
[26] Thomas Hillecke; Anne Nickel; Bolay, Hans Volker Bolay (2005), Scientific perspectives on music therapy, *Annals of the New York Academy of Sciences*, Vol. 1060, 2005, p. 280.
[27] Thomas Hillecke; Anne Nickel; Bolay, Hans Volker Bolay (2005), Scientific perspectives on music therapy, *Annals of the New York Academy of Sciences*, Vol. 1060, 2005, p. 275.

[28] M.J. Lambert (1992), Psychotherapy outcome research: implications for integrative and eclectic therapists, *Handbook of Psychotherapy Integration*. (ed. J.C. Norcross & M.R. Goldfried), pp. 94–129. Basic Books. New York. Reference taken from Scientific perspectives on music therapy, *Annals of the New York Academy of Sciences,* 2005, Vol. 1060.
[29] Thomas Hillecke; Anne Nickel; Bolay, Hans Volker Bolay (2005), Scientific perspectives on music therapy, *Annals of the New York Academy of Sciences*, Vol. 1060, 2005, pp. 277.
[30] Thomas Hillecke; Anne Nickel; Bolay, Hans Volker Bolay (2005), Scientific perspectives on music therapy, *Annals of the New York Academy of Sciences*, 2005, Vol.1060, 2005, pp. 278.
[31] H. Walach et al. (2009), Spirituality: The Legacy of Parapsychology, *Archive for the Psychology of Religion,* vol. 31, p. 286.
[32] H. Walach et al. (2009), Spirituality: The Legacy of Parapsychology, *Archive for the Psychology of Religion,* vol. 31, p. 285.
[33] Friedman and Krippner notice that "regarding the issue of methodology, it is amazing in itself that advocates and counteradvocates, both credible on their own terms, can look at the same data and draw vastly different conclusions. (…) people with different worldviews could look at the same data and interpret them in widely divergent ways." See Stanley Krippner and Harris L. Friedman (2009), *Debating Psychic Research*, Praeger, p. 202.
[34] Dean Radin and Roger Nelson (2000), Meta-analysis of mind-matter interaction experiments: 1959 to 2000, Boundary Institute, Los Altos, California Princeton Engineering Anomalies Research, Princeton University, p. 9.
[35] Stefan Schmidt et al. Distant intentionality and the feeling of being stared at: Two meta-analyses, *British Journal of Psychology* (2004)*,* 95, p. 245.
[36] Larry Dossey (2007), PEAR Lab and Nonlocal Mind: Why They Matter, *Explore*, Vol. 3, No. 3, pp. 193-194.
[37] Many studies found evidence for nonlocal healing. See for a list of studies notes 29-76 in Larry Dossey (2007), *Explore*, , Vol. 3, No. 3, pp.195-196.
[38] Russel Targ & Jane Katra (1990,1998), *Miracles of Mind*, p. 231.
[39] Braud, W. & Schlitz, M. (1983). Psychokinetic influence on electrodermal activity. *Journal of Parapsychology*, 47, pp. 95-119.
[40] Concepts like consciousness or information 'fields' inspire many people, but I wonder if the metaphor 'field' is right to describe the phenomena in which consciousness and reality impinge on each other. See also Iebele Abel (2009-2013), *Manifestations of Mind in Matter*, ICRL Press, pp. 125-126.
[41] Russel Targ & Jane Katra (1990,1998), *Miracles of Mind*, pp. 251-253.
[42] Robert G. Jahn (1996), Information, Consciousness, and Health, *Alternative Therapies*, No. 3.
[43] Luke Hendricks (2010), The Healing Connection: EEG Harmonics, Entrainment, and Schumann's Resonances, *Journal of Scientific Exploration,* Vol. 24, No. 3, pp. 420.
[44] See also section *ISMF music and Emotion.*
[45] A. Martin Wuttke (1992)*,* Addiction, Awakening, and EEG Biofeedback*, Biofeedback*, Vol. 20, No. 2.
[46] Russel Targ & Jane Katra (1990,1998), *Miracles of Mind*, p. 124.
[47] Russel Targ & Jane Katra (1990,1998), *Miracles of Mind*, p. 124.
[48] S. Gröblacher et al. (2007), *Nature* 446, p. 871. Refered to by Dean Radin (2012), *Physics Essays 25*, 2.
[49] Dean Radin, Leena Michel, Karla Galdamez, Paul Wendland, Robert Rickenbach & Arnaud Delorme (2012), Consciousness and the double-slit interference pattern: Six experiments, *Physics Essays 25*, 2.
[50] H. Walach et al. (2009), Spirituality: The Legacy of Parapsychology, *Archive for the Psychology of Religion,* vol. 31, 2009, p. 301.
[51] See: C.J. Ehman, (2009), Spirituality & Health: Current Trends in the Literature and Research. University of Pennsylvania Medical Center (Web), and Andrew J. Weaver et. Al (2006), Trends in the Scientific Study of Religion, Spirituality, and Health: 1965-2000, *Journal of Religion and Health*, Volume 45, Issue 2, June 2006, pp. 208-214.
[52] This definition was endorsed by the WHO in resolution EB 10 1.R2 (1998). See: M.H. Khayat (1999*), Spirituality in the Definition of Health: The World Health Organisation's Point of View*; J.L.F. Gerding (2013), *Filosofische bespiegelingen rond spiritualiteit*, Universiteit Leiden, p. 8; James Larson (1996), The World Health Organization's definition of health: Social versus spiritual health, *Social Indicators Research*, Vol. 38(2), 1996, pp.181-192.
[53] Cicero, *De Divinatione*. Book II, 5.
[54] Hélène L. Gauchou, Ronald A. Rensink , Sidney Fels (2012), Expression of nonconscious knowledge via ideomotor actions, *Consciousness and Cognition*, vol. 21, 2012, p. 980.
[55] Wouter J. Hanegraaff (ed. 2005). *Dictionary of Gnosis and Western Esotericism, Volume I*. Leiden: Koninklijke Brill, 2005, p. 225.
[56] Wouter J. Hanegraaff (2003). How Magic Survived the Disenchantment of the World, Religion 33.4, p. 361.
[57] Wouter J. Hanegraaff (2005). *Dictionary of Gnosis and Western Esotericism, Volume I*. Leiden: Koninklijke Brill, 2005, p. 225.
[58] Wouter J.Hanegraaff (2005). *Dictionary of Gnosis and Western Esotericism, Volume I*. Leiden: Koninklijke Brill, 2005, p. 861.
[59] Francesca Rochberg (2010). In the Path of the Moon, Babylonian Celestial Divination and its legacy, *Studies in Ancient Magic and Divination*, Vol. 6, Leiden-Boston: Brill, 2010, p. xxi.
[60] Chance and determinability separates events that are of interest of divination and which are not. See Cicero, *De Divinatione*, Book I, 5:14: "Divination is the foreseeing and foretelling of events considered as happening by chance." Events that are due to natural causation are excluded from divination; see Book II, 14:34 and 19:44.

[61] Textbooks containing lists of artifacts have been found near Fara, Iran/Afghanistan. Artifacts appear frequently as omen protasis in Sumerian literature. See Samuel Noah Kramer, Cultural Anthropology and the Cuneiform Documents, *Ethnology*, 1:3 (1962:July) p. 307.

[62] The correspondence principle that theories must agree with experimental evidence in physics, and the theological idea of correspondences, meaning that spiritual and physical realities are related, is but another example of historical continuity of correspondence in scientific thought with 'different aim and content.'

[63] Ervin Schrodinger(1944). *What is Life? The Physical Aspect of the Living Cell*. Cambridge University Press, 2008, p. 68, p. 76-85.

[64] I refer here to the 'Yates paradigm' according to which changing attitudes towards ancient knowledge - and the hermetic tradition (including theory of correspondences) in particular - have significantly shaped the direction of scientific progress. The 'Yates paradigm' has come in for legitimate criticism. See Antoine Favre and Wouter J. Hanegraaff (1998), *Western Esotericism and the Science of Religion*. Leuven: Peeters, 1998, p. XIII-XIV.

[65] For the Babylonian priests everything could be read as a sign. Theologians of Jewish, Muslim and Christian traditions gave higher regard to prophecies, but still enjoin believers to reflect on the natural world and its movements in order to discover signs from God's omnipotence. See Amur Annus (2010), Divination and interpretation of signs in the ancient world*, The Oriental institute of the University of Chicago Oriental Institute Seminars*, Number 6, 2010, Chicago, Illinois, 2010, p. 12-13.

[66] As an example Jaques Monod states that "Chance *alone* is at the source of every innovation, of all creation in the biosphere" in *Chance and Necessity: An Essay on the Natural Philosophy of Modern Biology* (1972), pp. 112-113.

[67] Including control over their fellow men. See for the relation between governmental control and statistics: Barry Smart (2004): *Michel Foucault*, Routledge, 2004, the chapter *On Government*, p. 129: "One of the forms of knowledge which developed to provide a knowledge of the state, namely statistics, became a major component of the new technology of government." See also: Michel Foucault (1975): *Surveiller et punir: naissance de la prison,* and, more specifically related to healthcare practice: Hans Achterhuis (1988): *De markt van welzijn en geluk.*

[68] Although the classification of diviners as 'scientists' would probably not make sense to, for example the ancient Babylonian, from our current position the ancient intellectual tradition was 'theory laden' and featured with empiricism and systematization of knowledge. See: Francesca Rochberg (1999). Empiricism in Babylonian Omen Texts and the Classification of Mesopotamian Divinations as Science, *Journal of the American Oriental Society*, Vol. 119, No. 4, 1999, p. 561 and p. 565.

[69] Wayne B. Jonas & Harald Walach (2007). From Parapsychology to Spirituality: The Legacy of the PEAR Database, *Explore*, Vol. 3, No. 3, May/June 2007, p. 197: "Science marched its own way, trumpeting its favorite tune 'Matter is All, and We Will Show You Why.' The scientific community stomped every evidence to the contrary in the ground – such as produced by the Society for Psychic Research."

[70] Jaques Monod, note 66.

[71] See Kuhn's *Structure* for a definition of normal science p. 80 (normal science brings fact and theory to closer agreement). The *domain* of normal science is limited to problems that only lack of ingenuity keeps them from being solved (p. 37.) Thomas S. Kuhn (1922). *The structure of scientific revolutions.* University of Chicago Press, 1996.

[72] Knut Graw (2006). Locating Nganyio Divination as Intentional Space, *Journal of Religion in Africa*, 36.1, 2006, p. 78, 113.

[73] The term 'own divination' is taken from Rudolf Otto (1917), *Das Heilige*. *Über Das Irrationale In Der Idee Des Göttlichen Und Sein Verhältnis Zum Rationalen.* Dutch translation, Het Heilige (2002), p. 240.

[74] Roderick Main (1997), *Encountering Jung. On Synchronicity and the paranormal*. Princeton University Press, 1997, p. 101.

[75] This term was introduced by C.G. Jung. Jung defined synchronicity in a variety of ways. To mention some: "Meaningful coincidence", "acausal parallelism", or "acausal connecting principle." See Roderick Main (2007), *Revelations of Chance: Synchronicity As Spiritual Experience.* Suny Series in Transpersonal and Humanistic Psychology, 2007, pp. 14-17.

[76] Jung, Briefe III, 1973, p. 283 (my translation from C.G. Jung, *Herinneringen, Dromen, Gedachten*, Lemniscaat, 2010, p. 322).

[77] C.G. Jung (1967). Ges. Werke VIII, p. 105, 576. (Reference from C.G. Jung, *Herinneringen, Dromen, Gedachten*, Lemniscaat, 2010, pp. 372-373).

[78] Roderick Main (2007). *Revelations of Chance: Synchronicity As Spiritual Experience.* Suny Series in Transpersonal and Humanistic Psychology, 2007, pp. 39-62.

[79] Roderick Main (2007). *Revelations of Chance: Synchronicity As Spiritual Experience.* Suny Series in Transpersonal and Humanistic Psychology, 2007, p. 62.

[80] Roderick Main (2007). 2007, *Revelations of Chance: Synchronicity As Spiritual Experience.* Suny Series in Transpersonal and Humanistic Psychology, p. 60.

[81] Roderick Main (2007). *Revelations of Chance: Synchronicity As Spiritual Experience.* Suny Series in Transpersonal and Humanistic Psychology, 2007, p. 58.

[82] C.G. Jung (1921). *Collected Works*. Vol. 6, Psychological Types. Routledge, 1971, p. 474.

[83] Avery Dulles (1983). *Models of Revelation*, Gill land Macmillan. Referred to by R. Main (2007), p. 59.

[84] Roderick Main (2007). 2007, *Revelations of Chance: Synchronicity As Spiritual Experience.* Suny Series in Transpersonal and Humanistic Psychology, p. 148; C.G. Jung (1950). *The I Ching or Book of Changes*. Princeton University Press, 1997, p. xxx: "(…) the I-Ching is called upon when one sees no other way out."; Immanuel Kant (1793). *Die Religion innerhalb der Grenzen der bloßen Vernunft*, p. 50; pp. 57-64; p. 64, end of footnote.

[85] J.L.F. Gerding (2013). *Filosofische bespiegelingen rond spiritualiteit*, Universiteit Leiden, p. 3.
[86] After Bruscia, the described method could be called descriptive, rather than diagnostic, interpretive, prescriptive, or evaluative. See chapter 4 of Kenneth E. Bruscia (1998): *Defining Music Therapy*. *Second Edition*. Barcelona Publishers (USA), 1998.
[87] See for examples of such experiences in literature Etzel Cardena (2010): *Varieties of Anomalous Experience: Examining the Scientific Evidence*; William James (1902): *The Varieties of Religious Experience*.
[88] Group sessions during lectures and art events are continued, however.
[89] See chapter 6 (Intervention) of Kenneth E. Bruscia (1998): *Defining Music Therapy*. *Second Edition*. Barcelona Publishers (USA), 1998.
[90] Iebele Abel (2013). ICRL Technical Report 13.001.
[91] Matthew D. Smith (2003). The Role of the Experimenter in Parapsychological Research. *Journal of Consciousness Studies*, 10, no. 6-7, 2003, pp. 69-84.
[92] Individuals' reactions to their anomalous experiences can foster psychopathology and trauma. See for some in depth information Berentbaum et al. (2001): *Varieties of Anomalous Experiences: Examining the Scientific Evidence*, (ed. Etzel Cardeña, Steven Jay Lynn, and Stanley Krippner), Washington D.C.: American Psychological Association, 2001, p. 35; Chapter 4 of Pim van Lommel (2010): *Consciousness beyond Life. The Science of the Near-Death Experience.* New York: Harper Collins, 2010; Denish Dutrieux (2004). *Kundalini,* Deventer: Ankh Hermes, 2004.
[93] Henri Bergson (1932). *The Two Sources of Morality and Religion*. University of Notre Dame Press, Notre Dame (Indiana), 1977, pp. 228-229.
[94] Henri Bergson (1932). *The Two Sources of Morality and Religion*. University of Notre Dame Press, Notre Dame (Indiana), 1977, p. 310.