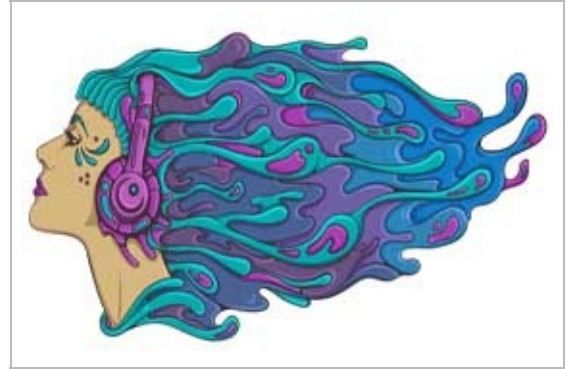


# Psychedelics and Psi

Users of psychedelic substances, from traditional shamans to modern-day therapy patients and recreational users, have often reported ESP experiences occurring in the drug-state. Parapsychologists, keen to discover whether this altered state of consciousness might prove a reliable way to induce clairvoyance and telepathy, carried out a number of surveys and experimental studies before the 1960s, when such research was brought to an end by the virtual global ban on psychedelics. However, the restrictions on such research are gradually easing, opening a prospect of the relationship between psi and psychedelics being better understood.



## Definition

According to Grinspoon and Bakalar, a psychedelic substance is 'one which, without causing physical addiction, craving, major physiological disturbances, delirium, disorientation, or amnesia, more or less reliably produces thought, mood, and perceptual changes otherwise rarely experienced except in dreams, contemplative and religious exaltation, flashes of vivid involuntary memory, and acute psychoses.'<sup>[1]</sup>

## Field Reports of Intentional and Spontaneous Psi Phenomena

Archaeological evidence suggests psychoactive plants have been ingested the world over for millennia,<sup>[2]</sup> and there are many examples in the literature of anthropology and ethnobotany of this leading to the appearance of ostensible psi phenomena<sup>[3]</sup> - despite reservations on the part of anthropologists against reporting them.<sup>[4]</sup> Reports of paranormal experiences in this context became more frequent following the discovery of psychedelic compounds by the academic community, and their popularization by the novelist Aldous Huxley<sup>[5]</sup> and others. This attracted the attention of parapsychologists, who embarked on research of psi in relation to psychedelics, primarily from the 1950s and 1960s<sup>[6]</sup>. JB Rhine, the founder of parapsychology as an experimental science, ran informal psychedelic sessions in 1961 in collaboration with the then Harvard psychologists Timothy Leary and Richard Alpert,<sup>[7]</sup> although the sessions apparently generated too much spontaneous laughter for anyone to credibly test for anything.<sup>[8]</sup>

Several other parapsychologists have reported personal ESP experiences with the use of psychedelics.<sup>[9]</sup> Krippner's apparent precognitive vision of President Kennedy's assassination while on psilocybin a year before serves as an example.<sup>[10]</sup> Similar reports of ESP being experienced by consciousness researchers, chemists, anthropologists and psychonauts can also be found elsewhere in the literature.<sup>[11]</sup>

There are surprisingly few published psychiatric inpatient reports relating to psychedelics and paranormal experience.<sup>[12]</sup> This may be due to the lack of spontaneous phenomena within the psychiatric population, or to the medicalization within psychiatry of paranormal experiences as 'delusions' or 'hallucinations'. Indeed, Mogar noted that early psychoanalytic and behaviourist researchers using LSD were prejudiced against ESP phenomena.<sup>[13]</sup> Yet one study, a psychiatric-interview survey with users of LSD,<sup>[14]</sup> reported precognitive experiences as one of the symptoms of the LSD flashback phenomena, now referred to as 'hallucinogen persisting perception disorder'.<sup>[15]</sup>

On the other hand, many accounts of paranormal experiences with psychoactive drugs can be found in the field of psychedelic-assisted psychotherapy, from therapists who write about their work in detail, and these tend to occur with greater frequency than in non-psychedelic therapy<sup>[16]</sup>. The psychiatrist Stanislav Grof - who is generally credited with the greatest expertise in this field, having conducted more than 4,000 psychedelic therapy sessions over a two decade period - claimed to have observed patients experiencing ESP - particularly precognition and accurate remote viewing - on a daily basis.<sup>[17] [18]</sup> The occurrence of extraordinary coincidences, or synchronicities, was the most frequent type of experience but, curiously, these occurred only among those clients who experienced transpersonal breakthroughs within the psychedelic session.<sup>[19]</sup>

A wealth of reports attests to the spontaneous occurrence of ostensible psi phenomena with the use of psychedelic substances, but such experiences are not necessarily genuine psi events. Aside from the usual arguments for and against spontaneous phenomena as evidence for the paranormal,<sup>[20] [21]</sup> the fact that respondents had consumed a vision-inducing

substance may be considered reason to question the accuracy of their perception and the interpretation of their experiences – at least for cases that are not substantiated by evidence or independent observers. Nevertheless, Shanon<sup>[22]</sup> pointed out that the usual definitions of hallucination in the psychological literature fail to adequately encompass the diverse and complex nature of experiences that occur with psychedelics, nor can assumptions be made about the ontology (the reality) of such psychedelic-induced visions. Indeed, it is common for people who have had ostensibly paranormal psychedelic experiences to emphasise how real they felt, more real even than ordinary waking experience.<sup>[23]</sup> Empirical research is needed to validate these claims.

## Surveys of Paranormal Belief and Experience in Relation to Drug Use

Two trends can quickly be perceived in the research. First, virtually all of the 16 surveys reviewed were published since the 1970s, following the ban on the use of psychoactive drugs that led to an end to research with humans (although this research is now slowly resuming). Second, most of the surveys primarily focused on paranormal experiences (nine surveys) and/or belief (seven surveys); they also tended to record drug use information as one of many possible co-variables (ten surveys), often omitting to distinguish among the different substances. Only six studies specifically approached users of psychoactive substances as the target sample.<sup>[24]</sup>

The findings from the survey research indicate a small but consistent - and typically significant - relationship ( $r = .16$  to  $.25$ ) between paranormal belief and drug use, although its size was more pronounced among marijuana users in one study.<sup>[25]</sup> Furthermore, these studies support the hypothesis that psychedelics can induce some paranormal experiences, although the arguments that are advanced for and against the genuineness of field reports also prevail here.<sup>[26]</sup> Of the reviewed surveys, correlations between the occurrence of paranormal experiences (including psi and mystical experiences) and the use of all drugs (excluding prescription drugs) ranged from  $r = .13$  to  $.46$ , and were typically significant. In addition, or alternatively, those reporting ESP and anomalous or paranormal experiences were found to be significantly more likely to use psychedelics. One study recorded the same finding for recurrent spontaneous psychokinesis (also known as poltergeist phenomena), although only tentatively.<sup>[27]</sup>

Of those reporting the use of psychedelics, between 18-83% reported ESP experiences – most commonly telepathy but also precognition – actually occurring during drug use, with heavier users reporting more experiences where specified. Yet, conversely, the occurrence of psychokinesis during drug use was only reported to occur by between 13-22% of those using psychedelics.<sup>[28]</sup>

Where specified, the relationship with paranormal experiences, belief in the paranormal, transliminality, and tolerance of ambiguity is much reduced with cocaine, heroin, and alcohol, compared to psychedelics, perhaps reflecting Metzner's classification of these former substances as consciousness-contracting drugs.<sup>[29]</sup> The same is also true for the negative relationship with the fear of psi and use of psychedelics, which is not apparent with heroin and actually reversed with alcohol, although replication and analyses for specific classes of drugs is needed to confirm this.<sup>[30]</sup>

Correlations between self-reports of cannabis use and 'thought transmission' in psychiatric research are apparent, often indirectly, though telepathy experiences are also more widely reported in the apparent absence of pathology, with or without cannabis. Most of the surveys failed to adequately identify which substances lead to which experiences, although a switch to such taxonomic research is now evident.<sup>[31]</sup> Substances particularly favourable to the experience of telepathy were found to be cannabis, MDMA and DXM. No one substance was particularly generative of precognitive experiences, and possible candidates for clairvoyance were cannabis, LSD, and psilocybin. As yet no research has explored both state and trait personality dimensions in relation to substance-induced psi experiences, although such research is encouraged.

<sup>[32]</sup> <sup>[33]</sup>

## Experimental Psi Research with Psychedelics

The earliest parapsychology experiments with psychoactive substances, published between 1943 and 1961, were conducted with simple stimulants and depressants such as caffeine, amphetamine, alcohol, amytal, and quinal-barbitone, with mixed results.<sup>[34]</sup>

Table summarising all controlled experiments into ESP with psychedelics

Study	Substance	N	Type	Control condition	Results

<b>Forced Choice</b>					
Rush & Cahn (1958)	mescaline	3	ESP	?	ns
Puharich (1959, 1962)	<i>A. muscaria</i>	26	ESP	pre-drug	sig +ve
Whittesley (1960)	LSD	27	ESP	pre-drug	ns
Langdon-Davies (1961)	mescaline	1	ESP	no	sig +ve
Masters & Houston (1966)	LSD	27*	ESP	no	sig +ve
Asperen de Boer <i>et al</i> (1966)	psilocybin	36	ESP	no-drug group	sig +ve (ns vs. control)
Pahnke (1971)	LSD	5	ESP	pre-drug	ns
Kugel (1977)	LSD	?	T	pre-drug	ns
Tinoco (1994)	ayahuasca	1	T & C	no	ns
Don <i>et al</i> (1996)	ayahuasca	?	C	no	ns
<b>Free Response</b>					
Rush & Cahn (1958)	mescaline	3	P	?	+ve (no stats)
Smythies (1960, 1987)	mescaline	1	P	no	+ve (no stats)
Osiris (1961)	LSD	6	P	no	+ve (no stats)
Asperen de Boer <i>et al</i> (1966)	psilocybin	36	P & C	no-drug group	sig +ve (ns vs. control)
Rouhier (1925, 1927)	mescaline	6	C	no	+ve (no stats)
Cavanna & Servadio (1964)	LSD or psilocybin	3	C	pre-drug	+ve (no stats)

Wezelman & Bierman (1997)	cannabis	36*	C	no-drug group	+ve vs. control (ns vs. MCE)
Wezelman & Bierman (1997)	psilocybin	6*	C	no	sig. +ve (stacking effect)
Puharich (1962)	<i>A. muscaria</i>	4	T	pre-drug	sig. +ve (optional stop)
Asperen de Boer <i>et al</i> (1966)	psilocybin	36	T	no-drug group	ns
Masters & Houston (1966)	LSD	62*	T		+ve (no stats)
Bierman (1988)	psilocybin	20*	T	pre-drug	ns
Tinoco (1994)	ayahuasca	3	T	no	ns

Type: ESP = general ESP card guessing, or not clearly specified; P = psychometry; T = telepathy; C = clairvoyance

\* Study reports that participants were experienced with psychedelics

So far there have been only 18 published papers, comprising 23 separate experiments, into the efficacy of psychedelics for inducing ESP, primarily with LSD or psilocybin, but also with mescaline, cannabis, *Amanita muscaria*, and ayahuasca (for a summary see Table 1). The results of these experiments, which began in the 1950s, varied in their degree of success, most likely in relation to the methodology involved.<sup>[35]</sup> The most successful experiments tended to utilize participants who were experienced in the use of psychedelics, and also utilized free-response testing procedures, with open-ended mentation regarding their internal state rather than forced-choice guessing scenarios, which tend to be repetitive and thus rather boring, especially in the drug-induced state. Indeed, Luke<sup>[36]</sup> suggests that the more naïvely-designed projects lost any hope of sensibly testing for anything, let alone psi, once their inexperienced participants succumbed to the mystical rapture of their first trip.

These few experiments were also reported quite differently, sometimes as entire monographs in excess of a hundred pages, at other times as footnotes within another published report, often lacking useful details and statistics. The majority were essentially pilot studies, mostly conducted during the psychedelic research period of the 1960s.

Due to the exploratory nature of most of these experiments, it is difficult to fully assess their efficacy in using psychedelics to produce ESP (no psychokinesis experiments having been attempted). In most cases the study could have largely been improved with an adequate control condition for order effects,<sup>[37]</sup> also the masked use of decoy targets in the judging process. Procedures using subjective probability estimates by experimenters (such as Asperen de Boer, Barkema, & Kappers<sup>[38]</sup>) are now virtually obsolete in parapsychology, being difficult to assess and prone to bias.<sup>[39]</sup> Of 10 ESP-card experiments, in the one that used a control condition the scores in the psilocybin condition were significantly different from chance and were also superior to the control condition, although not significantly.<sup>[40]</sup> Nevertheless, experiments using forced choice ESP-card type symbol guessing procedures were largely unsuccessful compared to chance expectation. Indeed, the use of the symbol-guessing procedure has been widely criticized for being far too mundane under the influence of psychedelics.<sup>[41]</sup> Even so, using *Amanita muscaria*, Puharich<sup>[42]</sup> showed that forced-choice procedures could be successful with picture-sorting tasks, although there are concerns that Puharich's experiments were not well controlled for possible sensory leakage.

Alternatively, more engaging, free-response procedures have demonstrated at least some success in all but one of the four

studies that used psychometry – the supposed ability of psychically determining the provenance of a given object – although rarely with any control condition for comparison. A clearer indication of possible psychedelic-induced ESP, at times in comparison to a control condition, comes from the four clairvoyance and four telepathy designs, which were mostly positive.<sup>[43]</sup> Despite some promising trends, however, replication is needed and, in most cases, with better methodology and pre-planned analyses. It remains curious that no formal experiments with precognition or psychokinesis have been carried out, particularly the former, considering that powers of divination are traditionally attributed to many plant psychedelics.

## Methodological Critique of the Experimental Research and Suggestions for Future Study

When consideration is given to what has been learned from these largely pilot studies, experimenters and commentators alike have highlighted the difficulties involved in attempting to test for psi with participants who have taken a psychedelic. Asperen de Boer *et al.*<sup>[44]</sup> suggested that participants' willingness to perform in the task was important, but given the difficulty of maintaining alertness, self-control, focus, interest and orientation to the task,<sup>[45]</sup> <sup>[46]</sup> equal or more importance should be given to the participants' *capability* of performing in the experiment, rather than mere willingness.<sup>[47]</sup>

Parker<sup>[48]</sup> notes that a participant's increased sensitivity to subtle influences under psychedelics is both a boon and a bane to research. Luke<sup>[49]</sup> points out that the qualities that make such research alluring also make for poor test participants, as they may become engrossed in one or more aspects of the experience – the aesthetic rapture,<sup>[50]</sup> <sup>[51]</sup> the quest for philosophical knowledge,<sup>[52]</sup> soul-searching self-examination,<sup>[53]</sup> their personal drama<sup>[54]</sup> <sup>[55]</sup> – or simply in observing the flow of their thoughts.<sup>[56]</sup> In addition, participants may struggle to find adequate ways to describe<sup>[57]</sup> the overwhelming flood of ideas and emotions,<sup>[58]</sup> and the speed of change of the internal experience.<sup>[59]</sup> <sup>[60]</sup> The experience of dissociation (for instance with ketamine) can also hinder communication when participants are no longer present or aware of their physical environment, and, as Huxley<sup>[61]</sup> notes, there is a need to reassure participants of their very identity once constructs of space and time disappear.

Despite such drawbacks, it is apparent that obstacles to research may be alleviated or even eliminated if participants in research are experienced in the use of psychedelics.<sup>[62]</sup> <sup>[63]</sup> <sup>[64]</sup> Indeed, about a quarter of inexperienced participants are expected to have intense spontaneous mystical experiences during their first trip.<sup>[65]</sup> Only three of the 19 studies<sup>[66]</sup> <sup>[67]</sup> <sup>[68]</sup> specifically reported the use of experienced participants, and these were relatively more successful at getting above-chance psi scores than those that used inexperienced participants.<sup>[69]</sup> Further, it has been suggested that experienced participants can be trained more easily to stabilize their experience<sup>[70]</sup> <sup>[71]</sup> and may even train themselves to achieve this naturally through repeated use.<sup>[72]</sup> Regardless of training, it has been strongly advised that participants be allowed to stabilize their experience before testing begins.<sup>[73]</sup> <sup>[74]</sup> <sup>[75]</sup> <sup>[76]</sup> Pahnke<sup>[77]</sup> further recommended an eight to twelve hour pre-dose preparation period when working with terminal cancer patients, although Ludwig<sup>[78]</sup> questioned the necessity of this in a parapsychological context.

Stabilization of the experience may even be expedited by inducing hypnosis prior to drug administration<sup>[79]</sup> <sup>[80]</sup> in what has been called the 'hypnodelic' state.<sup>[81]</sup> Alternatively, Ryzl<sup>[82]</sup> reported re-inducing LSD states through hypnosis, as is also reported elsewhere; it was uncertain how successful this was,<sup>[83]</sup> though success inducing other drug states (such as MDMA and heroin) has been reported.<sup>[84]</sup> <sup>[85]</sup> It may be that the entire range of psychedelic experiences can be hypnotically re-induced in experienced users, so that no psychedelics need actually be taken during the test procedure. Testing for psi under such 'controlled flashbacks' may overcome most of the stipulated problems, with the added advantage of investigating Rogo's<sup>[86]</sup> question of whether psi should be attributed to the neurochemical action of the drugs or the state induced thereby. Nevertheless, this approach somewhat restricts participants to those who are both experienced and comfortable with psychedelics and are also highly suggestible.

Some researchers<sup>[87]</sup> <sup>[88]</sup> suggest that scores in drug studies would improve with the use of psychics and mediums. However, the famous medium Eileen Garrett<sup>[89]</sup> noted that, while LSD enhanced her mediumistic experience, it did not improve her forced choice test-scores. Echoing this, Osiris<sup>[90]</sup> found that mediums were no more successful than normal participants in the other psychometry experiments. This may be explained by the problems associated with inexperienced psychedelic users, indicating that sample selection should primarily seek to identify experienced users in preference to psi-effective participants, although presumably, ideal participants would be both. It is also noted that in traditional shamanic cultures mediumship and the use of psychedelics are rarely found together.<sup>[91]</sup>

Considering aspects of timing, several authors have offered advice, though no formal studies have been conducted. Both

Ryzl<sup>[92]</sup> and Grof<sup>[95]</sup> suggested that the optimum period for testing psi with LSD was towards the end of the session, when the effects were levelling off – as in the Masters and Houston<sup>[94]</sup> experiments. However Pahnke<sup>[95]</sup> disagreed. As regards to the duration of the psi-task, in preference to the extended test periods favoured by some researchers,<sup>[96] [97]</sup> Osis<sup>[98]</sup> suggested twenty minutes as the maximum for optimum performance.

Some consideration has also been given to the optimal substance. Pahnke<sup>[99]</sup> recommended combining stimulants with psychedelics, whereas Asperen de Boer *et al.*<sup>[100]</sup> preferred psilocybin to LSD, due to it being milder; Cavanna and Servadio<sup>[101]</sup> agreed. Indeed, LSD has a much longer duration of action than psilocybin and as Blewett<sup>[102]</sup> noted, ten-hour trips are hard to staff. Ryzl<sup>[103]</sup> also questioned the utility of LSD in psychedelic psi testing; he proposed that the ideal substance, if it can be synthesized, should inhibit cortical activity to suppress the stream of thoughts, depress sub-cortical activity to block incoming stimuli, and excite spheres of the cortex involved in ESP production, while maintaining rational insight and increasing suggestibility. Such a designer drug is far in the future, however. Meanwhile, previously unfamiliar ethnobotanical substances are becoming known that have traditionally been used for psychic purposes, but which have not yet been thoroughly tested, or even tested at all, for instance *Salvia divinorum*.<sup>[104]</sup>

Tart<sup>[105]</sup> has further suggested that marijuana is an ideal substance for psi experimentation because of its wide familiarity, its mild psychedelic qualities, and its reputed ability to induce psi, experientially at least. Puharich's<sup>[106]</sup> apparent repeated success with *Amanita muscaria* also needs replicating. Other, non-psychedelic chemical psi research, such as Pablos's<sup>[107]</sup> unsuccessful first-person precognitive-dream drug-study, could also be replicated with the use of psychedelic substances that have been reported to induce psi in dreams, such as the ostensibly precognitive dreams described by both traditional users and by modern consciousness researchers in relation to substances such as *Calea zacatechichi*,<sup>[108] [109]</sup> *Silene capensis*,<sup>[110] [111]</sup> and tree datura (*Brugmansia*).<sup>[112]</sup>

Telepathy-like experiments might also benefit from the empathogenic effect of substances such as MDMA: the single participant who was placed under its influence in a remote detection experiment did exceedingly well<sup>[113]</sup>, and reports of telepathy are typical with this substance.<sup>[114]</sup> Group telepathy with people under the influence of DXM has also been independently reported by numerous survey respondents.<sup>[115]</sup> The use of a placebo in a double-masked or masked control condition, as in Cavanna and Servadio,<sup>[116]</sup> is of questionable utility in this type of experiment, because at anything less than sub-threshold doses the participant is likely to easily detect the effects of the drug; nevertheless, researchers should be aware that placebo drug effects have been demonstrated in ESP research, when coupled with positive false feedback on task performance.<sup>[117]</sup> One way in which researchers have attempted to circumnavigate the poor disguise of psychedelics, and reduce expectancy effects, in non-parapsychological research is to tell the participant in advance that they may receive a placebo or one of a number of different drugs, only one of which is a psychedelic, though ultimately participants can usually tell when they get a psychedelic dose.

Several researchers have also commented on the importance of dosage.<sup>[118]</sup> Indeed, Blewett<sup>[119]</sup> warned that giving participants low doses of LSD may not be sufficient to break through the barrier between the normal and the full-blown psychedelic state, and as a result be merely disorientating rather than transformative. Support for this logic is also evident in escalating dose research with DMT.<sup>[120]</sup> It is additionally advised that experienced participants control their own dosage,<sup>[121]</sup> as in the experiment by Wezelman and Bierman.<sup>[122]</sup> Participants' self-reports of the depth of the altered state were considered better than dosages as indicators of subjective effects.<sup>[123]</sup> Self-reports using the Hallucinogenic Rating Scale were seen to be more accurate indicators of dosage than physiological measures,<sup>[124]</sup> though the use of a scale of transpersonal experience, such as the Self-Expansiveness Scale Form,<sup>[125]</sup> would also likely be fruitful in discerning the relevant depth of the psychedelic state of consciousness. Furthermore, some researchers,<sup>[126] [127]</sup> have noted that the issue of dosage is largely irrelevant in comparison to the influence of the psychological factors of set and setting, as originally noted in psychedelic research by Leary, Litwin, and Metzner.<sup>[128]</sup> In discussion of this, Wayne<sup>[129]</sup> suggested that the influence of psychological factors on psychoactive drugs can vary their effects so much that the drug can be thought of primarily as an experience, composed of set, setting, and substance.

Factors considered important in determining psychological set include the participants' expectations, their attitudes towards themselves, their idiosyncratic perceptions, and their emotional orientation to the experiment.<sup>[130] [131]</sup> It is also deemed imperative to engender a sense of self-surrender, acceptance, and trust.<sup>[132]</sup> Factors considered important in determining psychological setting include those that are ordinarily considered under demand characteristics,<sup>[133] [134]</sup> particularly the experimenter's attitude, which should be warm, friendly, and supportive.<sup>[135]</sup> Psychological issues induced through interpersonal relations within the laboratory become magnified when participants are on psychedelics.<sup>[136] [137]</sup> Indeed, Cavanna and Servadio<sup>[138]</sup> highlighted this when one of their participants had an anxiety attack concurrent with their own anxiety, which led them to advise that experimenters themselves should be experienced users of the substance under investigation, as echoed by Strassman.<sup>[139]</sup>

Tart<sup>[140]</sup> also recommended that the experimenter should guide the experience towards the goal of the study, and criticized previous work that assumed psychedelic states will automatically induce psi: as noted by Tart, Osmond, and Beloff,<sup>[141]</sup> in traditional scenarios, the shamans who use these substances usually have extensive training and experience. It is further suggested that the experimental task be shaped to the state of the participant, not vice versa,<sup>[142]</sup> and utilize the strong motivation, directed awareness, and complex ritual that is found in shamanism.<sup>[143] [144]</sup> Grob and Harman<sup>[145]</sup> have also urged the integration of aspects from shamanic practices into scientific procedure, with attention being directed to factors of set and setting such as intention, expectation, preparation, group identification, and formalized structure, as well as the integration of the experience in the following months. Indeed, a multi-method approach to studying psychedelic shamanic practices is advised, so that ethnography can inform suitable experimentation.<sup>[146] [147]</sup>

Nevertheless, Storm and Rock<sup>[148]</sup> pointed out that, in psi research with psychedelics, researchers need to be aware of the difference between shamanic techniques and merely shamanic-like techniques; for example, the latter may lack the purpose of serving one's community. Tart<sup>[149]</sup> recommended the implementation of mutual research, where participants are considered as co-investigators, as a means to reduce experimenter bias and enhance a sense of participation, trust, and motivation. One way to ensure such congenial factors in the experimental setting may be to have an experienced psychedelic user and parapsychologist as both the experimenter and participant,<sup>[150]</sup> concerns over placebo effects notwithstanding.

## Overview of Psychedelic Psi Research

Even though the subjective paranormal experiences, clinical observations and anthropological reports are subject to all the usual criticisms and rebuttals that apply to non-experimental cases<sup>[151]</sup> there is a growing body of reports, rooted in thousands of years of traditional psychedelic use, that supports the notion that genuine psi phenomena do occur in psychedelic states. As evidence these data are not scientifically rigorous, but they have great value in mapping the phenomenological terrain of psi experiences with psychedelics. This body of reports is further supported by correlations from surveys linking psychedelic use with the increased reporting of psi experiences and belief in psi and the paranormal, although self-reports have more phenomenological merit than evidential value. Furthermore, even though it can be considered little more than exploratory at this stage, the experimental evidence is mostly positive and proves promising so far, illuminating both methodological pitfalls and possibilities.

It is apparent that parapsychopharmacology is a multidisciplinary endeavour, pooling expertise from anthropology, ethnobotany, phytochemistry, neurobiology, psychopharmacology, psychiatry, psychotherapy, transpersonal psychology, and indeed parapsychology. It also owes much to the non-academic explorers of consciousness, be they shamans, occultists, or psychonauts. This branch of research is still very much in its infancy, and, along with other fields conducting research with the use of psychedelics, has been operating very quietly since the late sixties, until a gentle turn in the tide during the last twenty years or so has seen experimental research resumed.<sup>[152]</sup> Nevertheless, experimental research continues to be constrained by requirements for strict ethical and often governmental approval before it can proceed, requiring lengthy applications.<sup>[153] [154]</sup>

Tart<sup>[155]</sup> recommended bypassing these difficulties by casually enrolling participants who were already using psychedelics, rather than having the experimenter administer the substances directly. An example of this kind of experiment involved several thousand Grateful Dead fans, renowned for their psychedelic consumption, who acted as senders in a series of dream telepathy experiments, with some success.<sup>[156]</sup> Indeed, taking what Giesler<sup>[157]</sup> calls a psi-in-process approach, and keeping naturalistic variables intact, group experiments may be one way to access the kind of group telepathy experiences that people tripping in groups sometimes report,<sup>[158]</sup> especially on DXM.<sup>[159]</sup> However, without the grounded and controlled atmosphere of a concert or shamanic ceremony, psychedelic group ESP experiments run the risk of turning into bacchanalian scenes, as reported in Puharich's experiments by his wife.<sup>[160]</sup>

Ideally, direct parapsychological research with psychedelics would expand beyond those countries that have legal access to such substances, such as the Netherlands and Brazil – the latter being the only place where experimental psychedelic parapsychology research has been conducted since the 1970s. Furthermore, treating these substances like any other drug worthy of investigation within a medical or therapeutic context has recently proven a fruitful means of inquiry for many researchers,<sup>[161]</sup> although psi research does not readily attract such funding at the present time. Nevertheless, it should be noted that psychedelics are considered as sacramentals by the spiritual and religious groups that use them and they must be utilized and researched with respect.

Luke<sup>[162]</sup> suggests that, besides trying to replicate promising free-response studies, experimental psychedelic research in the future should utilize protocols that maximize psi effects. This work can then simultaneously enhance process

research methodology, by indicating optimal conditions for psi through the psychologically magnifying effects of these substances. For instance, Bierman's<sup>[163]</sup> psychedelic psi research may have revealed the apparent psychic blocking of negative images, and from earlier experiments, that forced-choice tasks are clearly too mundane. Research should also seek to study these substances in the shamanic context, in which they have most effectively been used, designing appropriate test protocols for traditional settings.

Following in the footsteps of William James, Pablos returned to self-experimentation,<sup>[164]</sup> developing a viable protocol for self-testing precognitive dreaming abilities with drugs, that might be adapted to waking experimentation as well. Experimental research should also be designed and conducted with an appreciative consideration of Tart's proposals for the creation of state-specific sciences.<sup>[165]</sup> Finally, as ever greater numbers of substances are discovered, and with a correspondingly large natural participant pool of psychedelic users, there is a need for more thorough and focused phenomenological research, that investigates and identifies the various types of paranormal experience that may occur in relation to each.<sup>[166]</sup>

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