

EDITORIAL

Synthesizing Thoughts on Experimenter Psi

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A few years ago, I was performing a study examining the effects of meditation on the performance of psi tasks. One of the tasks was a Ganzfeld session that followed the standard auto-Ganzfeld protocol developed by Honorton and Hyman (1986). One exception is that the sessions did not include a sender, but instead required the participant to demonstrate clairvoyant or precognitive abilities, depending upon your interpretation of the GESP session. In accordance with the ethical requirements for the study, I listened in on the participant's verbalizations from a control room to insure they were comfortable and were able to complete the session. For various reasons, this study was never published, but the results of the study are not the focus of this article.

I sat in a control room filled with electronics including AV equipment, a couple computers, a complex sound mixing board, and some large headphones. After completing a few sessions with multiple participants, my mind began to wander, and though I continued to monitor what the participant was saying, I was distracted by other tasks and objects in the control room.

Taped to the side of one of the computers was an instruction sheet that described how to configure the mixing board for the session. It included instructions for positioning the color-coded knobs on the mixing board, and the instruction sheet was highlighted with colors to make it easier to follow. As I read the sheet and looked at the corresponding controls on the equipment, my focus drifted, and I began to visualize turning the appropriate dials.

"Turn the red knob to the midpoint." "Find the red knob in the third column..." "Press the button to turn on the red light on the right." As I read these instructions, highlighted in red on the information sheet, and looked at the red dials and lights on the mixing board, I heard the participant who was in the midst of a Ganzfeld session say, "I see red. I keep hearing the word red. There's a strong red field filling my mind." It was clear to me at this point that the session was compromised.

The Experimenter Effect

According to Palmer and Millar (2015), the experimenter effect in parapsychology has historically been characterized in two ways. Either the investigator is creating an environment that is psi conducive

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or psi repressive, or the investigators themselves are contributing to the effects observed during a research session, often interpreted as a form of experimenter psi.

Psychologists and social scientists have been exploring the impacts of investigators for decades including the effect of the sex or gender of the investigators (e.g. Rumenik, Capasso, & Hendrick, 1977), race of investigators (e.g. Marx & Goff, 2005), social influence and expectancy (e.g. Rosenthal, 1994), and how instructions are given to participants (e.g. Vogel, Rudolf, & Scherbaum, 2020). Sheldrake (2003) questioned the blinding practices used in the physical sciences, and Holman, Head, Lanfear, & Jennions (2015) advocated for blinded analyses in medical studies to avoid the expectations of investigators. Even the behavior of mice involved in animal studies have been affected by the sex of a human investigator (Georgiou, et al., 2018).

A diligent investigator will take these potential influences into account when performing parapsychology experiments, but as was illustrated in my Ganzfeld study, there appear to be other factors that affect experimental results. If we accept Stanford's PMIR model (1974) and Carpenter's First Sight Theory of Psi (2012), psi is both common and regularly employed in our daily lives, and there is every reason to believe that investigators and participants are unconsciously or unintentionally coordinating efforts to achieve common goals during a psi experiment. This might include telepathic connections, coordinated effort to achieve a PK effect, or, as is predicted by Decision Augmentation Theory (May, Utts, & Spottiswood, 1995), through the selection of an appropriate moment to begin or end a session.

This may seem like an overwhelming obstacle for all research, not just parapsychology research, because the source of the findings in a study can be the result of many confounding factors. Bierman and Jolij (2020) proposed a method to address the experimenter effect based on the hierarchical model of Houtkooper (in Bierman & Jolij, 2020) which postulates that the amount of contact an investigator has with a study participant or data is correlated with the potential influence that investigator has on the study results. That is, an investigator who is providing instructions for a session, discussing the activities with the participant, or performing the analyses for a study will have more impact on the study results than a research coordinator who is not directly involved with the participants or the data. By applying this model, Bierman and Jolij recommend that multiple investigators be involved in every project to minimize the impact of any single person and to equalize the effects of the investigators who have the most contact with the participants.

Though this approach would dilute the effect from a single psi conducive investigator, it leaves one important question unanswered. What is the impact of each individual investigator involved in the study? It is possible that every investigator in a particular study is psi conducive and impacting the study results which would invalidate the use of a large number of investigators in a study. If we assume that a psi conducive investigator is a rare commodity in parapsychology, this may not be a problem, but there is still a chance that a very strong psi effect could come from a single, gifted investigator who consistently gets significant results in their research studies, essentially breaking the hierarchical theory that is the foundation for this model.

The Synthesis

In an article published later in this issue, Michael Nahm proposes that parapsychologists look towards a synthesis of the theories in the field to advance our knowledge and build the foundations for future research. It is with this in mind that I take the next steps to discuss possible methods to address experimenter psi and to recognize its impact on experimental results. These proposals are based on previous research practices and personal experiences that have been discussed with multiple investigators who regularly publish on topics related to parapsychology. In addition, they draw from transpersonal and qualitative methodologies that have been employed to formalize the relationship between an investigator, a research participant, the research protocol, and the conditions under which a study is performed. It includes a discussion of best practices that may assist in reducing or, at a minimum, recognizing the impact of psi that might not come directly from the participant in a study.

Let us begin by recognizing, as Nahm does, the theories of First Sight (Carpenter, 2012), Psi Mediated Instrumental Response (Stanford, 1974), and the Model of Pragmatic Information (Lucadou, 2015). Each of these propose that psi information is readily available or psi is commonly employed in our daily lives. In contrast to the general impression that psi effects are rare and weak, these theories each discuss the robust nature of a common phenomenon which likely produces weak laboratory effect sizes because “psi experiments involve impersonal stimuli of little or no consequence, in contrast with reputed psi phenomena observed in everyday life (e.g., unexpected deaths of close people)” (Cardeña, 2018, p. 10) or the large effects from some more reliable research participants being diluted by the inclusion of many less engaged participants.

If we recognize that psi is an ever-present component of our cognitive processes or regularly integrated into our choices and activities, the natural extension of this theoretical foundation is that it occurs during laboratory studies and that investigators are utilizing psi during experimental sessions. Rather than denying this conclusion, let’s accept it as a given and explore ways that we can minimize the impact of experimenter psi in the context of a study. This leads us to the postulate that *all experimenters contribute psi to their experimental sessions to some extent, even those who claim that they have never had a psi experience.*

Accommodating Experimenter Psi

Schmeidler (1997) offered a number of suggestions to assist in identifying psi conducive investigators in an effort to recognize which investigators would produce results that could best be trusted by parapsychologists – i.e., those who have not explicitly demonstrated psi or have not demonstrated a consistent success in studies that are not replicated by other investigators.

Palmer (1997) explored ways to examine the impact of experimenter psi and provided cognitive, motivational, and methodological approaches to minimize its effects. His examination of this topic is thorough, but technologies and research methods have changed in the 25 years since its publication. What follows is an update to his suggestions for managing experimenter psi along with some specific recommendations to minimize its impact.

The first instinct of any researcher is to eliminate the factors that are not being evaluated in a session. If it's not contributing to the evaluation of the main hypotheses, it should not be part of the sessions or have an impact on the analysis. Typically, two approaches are used to achieve this.

- Design the experiment so that the factors cannot influence the study. For example, if environmental factors such as electrical fields may be affecting the study results, perform the study in a Faraday cage or an environment that eliminates electrical influences.
- Provide a sufficient sample size so that unwanted effects are minimized due to the diversity of a randomized sample.

Since the publication of the Pearce-Pratt study by Rhine (1937), it has been clear that ESP does not seem to deteriorate with distance or behave like other environmental factors that could be blocked. This makes the first approach difficult to implement. Later in this article we will discuss the possibility of creating more complex designs that might assist in minimizing – but not eliminating - the experimenter psi effect.

The second approach was adopted by Bierman and Jolij (2020) under the assumption that the variance between the psi effect of investigators would dilute experimenter psi and allow it to be factored out of the reported results. This may be possible, but it would require an increase in funding, more oversight and coordination from the primary investigator, and much more experimental complexity that may introduce other unwanted variables into a study. Even if all of these were addressed, the hierarchical theory does not account for situations where all of the investigators are demonstrating psi in their sessions or where certain individuals have a very strong psi influence on the study results. By accepting that all investigators use psi to some extent in research sessions, we must accept that no matter how large our sample becomes, we will still see the impact of experimenter psi, and it may vary depending on the investigators involved in the study.

At this point it is worth repeating that *all experimenters contribute psi to their experimental sessions to some extent, even those who claim that they have never had a psi experience.*

Rather than attempting to eliminate experimenter psi from a study, it is incumbent upon investigators to acknowledge their influence, determine their potential impact, and take steps to minimize their own effect on each session. First, let's discuss bracketing.

Bracketing

Bracketing is a core concept in interpretive phenomenological theory and procedures. It is based on processes developed by Husserl (1936) and refined by Giorgi (1997) to allow a qualitative researcher to recognize their own biases and potential impacts while collecting and analyzing data. It is also a process often used by counsellors to provide support for patients while acknowledging and maintaining their own ethical beliefs and biases independent of the counselling session (e.g., Kocet & Herlihy, 2014).

Bracketing is not a single procedure or a simple activity that can be applied by an uninitiated

investigator. It requires preparation, self-reflection, and practiced control in order to sufficiently investigate a research question in a fair and unbiased manner. This article will only provide a brief summary of the methods used in bracketing, but the article *Bracketing: A phenomenological theory applied through transpersonal reflexivity* (Dörfler & Stierand, 2021) provides a more complete explanation.

It begins with the concept of *Epoché* in which an investigator recognizes their position in the world and their role within the session. *Epoché* facilitates a grounded perspective that is designed to open the investigator to all possibilities as an observer. By acknowledging their role, the investigator recognizes their environment, their place within that environment, what brought them to this point in time, and what their expectations are for the coming session. The investigator fosters a sense of curiosity and wonder for the potential events that may occur, remaining open to possibility and providing an atmosphere ripe for accurate and unbiased observations. *Epoché* sets the tone for a productive session.

Next, the investigator explores their own beliefs and biases regarding the coming activities and acknowledges how they might influence what is about to happen. By consciously acknowledging their personal motivations and cognitive position, the investigator provides the opportunity to shift their thoughts and activities by remaining aware that they may have an unconscious impact on the session. The investigator performs a psychological reduction where they take time to reflect and consciously consider their personal prejudices, biases, beliefs, and cultural perspective. They embrace this perspective as a component of their normal thought processes, and recognize the potential impact it might have on the coming session.

It is important to note here that the psychological reduction does not require the investigator to eliminate their beliefs and biases, but only to consciously acknowledge them. Some practitioners and counsellors discuss leaving their beliefs at the door, but the psychological reduction is much more involved than leaving beliefs behind. Being a product of our culture and history, it is not possible to leave things behind, but it is possible to be aware of their potential impact and take actions to minimize those effects or avoid them completely.

Both *epoché* and the psychological reduction require an individual to perform extensive self-examination to recognize the cultural and historical factors that may have contributed to the formation of their prejudices, beliefs, and biases. Preparation can take many weeks, months, or even years, and it is constantly evolving as we encounter new experiences and form new expectations. In essence, it is never finished, and to maintain the appropriate level of preparation, an investigator must review their situation regularly to stay aware of the impact that it may have in each session.

Once an investigator has made the necessary preparations, they can complete these processes very quickly through the conscious application of a bracketing process directly before a session begins.

Bracketing a Parapsychology Session

The first step in preparing to bracket a parapsychological session is to recognize what types of beliefs or biases might affect any interaction before, during, or after the session. Each of us has developed beliefs regarding sound research practices, successful studies, psychological conditions that affect stud-

ies, and environmental conditions that contribute to successful psi studies. For example, many parapsychologists believe that successful studies involve participants who believe they will be successful, have a practiced mental discipline, and who have previous experience with psi testing. Of course, there are experimental results to support these beliefs, but to properly bracket a session, an investigator might follow the following steps.

- Acknowledge any beliefs that relate to the session including historical, cultural, psychological, or motivational beliefs
- Be aware of how these beliefs might affect their interaction with participants or their own behavior during the session
- Recognize that these are personal beliefs and that other people may have different beliefs
- Consider other beliefs or ideas that might evolve from these beliefs and integrate them into the process
- Be prepared and willing to change any beliefs if the evidence dictates a change
- Observe the session with curiosity, recognizing their role, and
- Accept the outcome of the session as providing new information

Bracketing and Experimenter Psi

To properly bracket a session, based on our earlier postulate, the investigator could acknowledge that their own psi might influence the session. To be most effective, each investigator could perform sessions to test their own influence and to learn which types of thoughts or behaviors might increase psi effects and which might decrease psi effects. This type of self-examination is not simple and can involve a large investment of time. To be fully aware of their own potential influence, an investigator might test themselves in multiple experimental conditions with multiple psi effects. Schmeidler (1997) offered a number of suggestions for investigators to perform self-examination for psi, but her goal was to identify investigators who produced results that could best be trusted by parapsychologists – i.e., those who have not explicitly demonstrated psi or have not demonstrated a consistent success in studies that are not replicated by other investigators. According to our preliminary postulate, this is an unreachable goal, but some of her suggestions for self-examination could provide insight for the bracketing process.

For example, an investigator might attempt remote viewing sessions both clairvoyantly and precognitively. They might practice meditation to attain altered states of consciousness that they might encounter during a long, boring research session. They might sit with a psi wheel in a sealed container while distracted with another task to see if there is any movement. They might even monitor and record their moods and emotions when they encounter issues with electronic devices. Each of these tasks would provide an investigator with information that could assist in the epoché phase of their bracketing session.

It is important to recall that the point of bracketing is not to eliminate the psi influence of the investigator, but rather to become conscious that it is inevitable and to minimize the impact of experimenter psi during a research session.

Designing for Experimenter Psi

When we consider the possibility of super-psi or psi activity that goes far beyond anything validated in previous lab studies, we must acknowledge that any of the investigators involved in a project, especially the primary investigator, could influence laboratory sessions, analyses, or even electronic data collection processes. This implies that it would be impossible to create a design that eliminates experimenter psi, but, as we have previously discussed, *all experimenters contribute psi to their experimental sessions to some extent, even those who claim that they have never had a psi experience.*

The purpose of this section is not to provide guidelines to eliminate experimenter psi but rather to acknowledge that experimenter psi is present in our study and to provide practices that minimize the overt opportunity for experimenters to express psi during a study.

A standard goal in all research is to observe without interfering with a study. These are a few of the methods that are commonly included in research designs to limit influence.

- Shield investigators from the conditions and activities of each session. For example, investigators should not be aware if a session is a control session or an experimental session. Similar types of information shielding are regularly used in research designs.
- Automate interactions with participants to standardize research conditions.
- Define and register methodologies and analysis methods before any data is collected for a study. A design that is completely defined provides a guide for investigators to avoid questionable research practices like optional stopping, post-hoc analyses, p-hacking, or defining exploratory studies as confirmatory. For a more complete discussion of questionable research practices see Andrade (2021) and Bierman, Spottiswoode, & Bijl (2016).
- Employ multiple investigators to observe and confirm that best-practices are being followed.

There are certainly other ways to limit the influence of investigators, but this list provides an outline for our further discussion of how to design research studies in order to minimize or limit the influence of experimenter psi.

Automating and Shielding Practices for Psi

One of the most effective ways to shield investigators from data is to automate the data collection and analysis methods used in a study. Automation can also be used to assign participants to groups, to determine start and end times for sessions, to select research targets, and to provide feedback to participants. Random number generators can be used to address many of these issues, and due to ad-

vances in computer chip technologies, it is a relatively simple task to produce a truly random algorithm (see <https://stackoverflow.com/questions/17616960/true-random-numbers-with-c11-and-rdrand>).

Considering the potential impact that an investigator can have on electronic devices, what types of safeguards can we implement to minimize experimenter psi in automated processes? Here are a few suggestions to reduce the influence of any investigator who is participating in a study by minimizing opportunities for experimenter psi.

- All instructions to participants should be provided in an automated way either in writing or via an audio recording. This minimizes the investigators contact with the participant and provides a consistent experience for all participants.
- When a study involves randomly assigned groups of participants, each participant should be assigned to a group at the exact time that they begin their session. This should be executed by an automated process that is controlled by software designed to establish the appropriate number of participants in each group, but assigns them to a group based on a random event.
- To implement Bierman's & Jolij's proposal of increasing the number of investigators in a study, the participants themselves can perform tasks that are often performed by the investigator. For example:
 - Each participant can start their individual sessions at a moment that they choose themselves. If each participant selects their own starting time, it reduces the likelihood that the investigator is using precognition to select a starting time when a random string will produce results to facilitate their desired outcome.
 - Random target selection can also be triggered individually by each participant in the study to reduce the impact of any single person in the selection process. Studies involving multiple participants in each session should vary which participant starts each task that might trigger a random event.
- Automated data analysis software can provide summary results for the study, but never expose the results of any individual session to the investigators. This provides the two-fold benefit of removing the investigators from the analysis process and reducing the possibility that the investigator has influence on individual sessions since they are never aware of the results of each session.

By implementing these suggestions, an investigator distances themselves from the mechanics of the study and potentially reduces the influence of experimenter psi.

Studies of this sort involve a large amount of preparation and setup to establish the appropriate automated procedures, and they leave the investigator out of the actual experimental sessions and the analysis process. Of course, the investigator would still interpret the study results in the same way that, for example, astronomers and quantum physicists explore the collected data to better understand what it means. The only difference is that the individual sessions would never be exposed to psi investigators and they would instead focus on understanding the summary data.

Studies That Are Not Automated

Not every study can be completely automated to remove the investigator from the sessions. Some studies require direct interaction with participants or a more closely monitored environment to avoid fraud or even to provide a comfortable environment for participants who don't work well with electronic equipment. Even in these studies, the automated steps above should be implemented where possible, but how can an investigator who is closely involved with the sessions maintain the sufficient distance to minimize experimenter psi?

Earlier in this article we discussed bracketing and how it can be used by an investigator to set an appropriate attitude for an experimental session. Through a combination of careful research design and the appropriate attitude, an investigator can maintain awareness of their potential influence on a study and hopefully minimize its impact on the results.

There are surely other methods that could be used by researchers to address issues related to experimenter psi, and there are likely analysis methods that might provide more insight into the extent of experimenter psi in each study. This article is offered as an initial integration of concepts regarding experimenter psi. I welcome further discussion or guidance to extend the proposed protocols or refine those offered above.

Epilogue

The Ganzfeld session mentioned at the start of this article was reprised a few months later after the participants had gone through meditation training. Again, I was in the same lab, running the same protocols with the same participants. Because of my earlier experiences, I was aware of the potential impact my own activities might have on the perceptions of the participants during the sessions. Nonetheless, after multiple sessions, my mind once again began to wander.

I was using an old mechanical stopwatch to time the sessions for much of the study, but after it stopped running, I began using the timer on my cell phone. The cell phone timer worked fine for these sessions, but it didn't have the charm of the old stopwatch that may have been used by researchers many years in the past in this historical lab.

After taking stock of my own beliefs and biases and after bracketing my Ganzfeld sessions, I was careful to avoid stray thoughts, especially thoughts related to instructions and colors that had corrupted my earlier session. Still, the stopwatch fascinated me, and I began to wonder why it had stopped working. I took it out and found that the crystal was loose, and that the back could be removed to replace the battery. I just might be able to use the relic again in future sessions.

As I was attempting to open the back of the watch, I heard through the headphones, "It's a clock. I keep seeing a clockface with a second hand that's moving fast."

It was the same participant who had seen red so clearly in the first session.

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