

# A PERSONAL VIEW OF THE SCIENCE OF PSYCHOLOGY

A Personal View of the Science of Psychology

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# A PERSONAL VIEW OF THE SCIENCE OF PSYCHOLOGY

## Introduction

The topic of this paper is *My Personal View of the Science of Psychology*. It incorporates the textbook and journal readings from my coursework, and integrates those with the ideas and experiences that I brought with me from prior education and from my life experiences.

### What science is (and is not)

According to Rosenberg (2006), the definition of what science is depends on whether one is a philosopher, an empiricist, a theorist, a reductionist, a feminist, a pragmatist, a naturalist or an epistemic relativist. To one, an observation is meaningless without an underlying paradigm, theory or preconception; to another, all conclusions must be framed in terms of social context or role. The pragmatic empiricist asserts that philosophical and theoretical considerations are empty until real-world observations have been made, whereas a reductionist might claim that final answers can never be reached.

For me, science must be an integrated combination of, in the first place, theory developed from the history and philosophy of man's search for the meaning of his existence in a bewildering universe with, in the second place, an openness to what is actually revealed through research methodologies that are both rigorous and inclusive. To many philosophers of science, there appears to be an inescapable disparity between rigor and inclusivity; instead, I view one as supporting the other; otherwise, the methodological rigor could become mechanical and unyielding, and thereby miss important nuances, and the inclusivity might become a sloppy hodge-podge.

Some authors (Dawkins, 1997; Dias, 2010) view science as a sort of religion, in a positive sense. They see it as a system for imparting comfort and understanding, with the

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practitioner as a kind of minister – an authoritative figure who has the answers to their clients' problems.

### **Is psychology a science?**

According to Laungani (2004), psychology must acknowledge its roots in philosophy and theory; otherwise, he said, this discipline would fall to the level of New Age seminars and cookbook recipes. To me, this means that psychology *could* be a science if, in general, it is practiced as such, with due objectivity, confirmable methodology and reliable statistical methods. Rychlak's (2000) and Strong (1991) cautioned us, however, that the client is not some mechanical object, but must be considered ethically and within the perspectives of well-established practices; thus, forcing case studies into the form of a science would not make it a science, nor even ethical practice. In addition, Dar, Serlin, & Omer (1994) raised serious questions about the validity of the statistical methods commonly used in psychological research, and Frick (1996) pointed out that researchers generally 'adjust' their alpha levels by employing, often many, "pseudo-alphas" to compensate for that fact that null-hypothesis testing is usually too narrowly conceived and cannot take into account the unexpected results with which psychological research is rife.

### **What is truth?**

Rosenberg (2005) posits that there is no appreciable difference between the accepted empirical laws of natural science and nomological constructs, as if they were just as true regardless of how we got to them. However, even Newton's old, reliable laws of thermodynamics are true only in carefully delimited spaces, such as on the surface of the earth;

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these laws stop being reliable at subatomic levels, in the centers of stars and nuclear explosions, at temperatures approaching absolute zero, at astronomical distances or for very large or massive objects, and so on.

Such conditions apply to the entire universe except for tiny bubbles of Newtonian rectitude like the surface of our planet. I therefore suggest that we stop using the term 'law' quite so generously and treat useful but limited propositions as either theories or guidelines or similar. Our edifice of science has even forgotten that, for example, the *theory* of evolution is only a theory because a) it can never be finally proven, and b) its logical flaws and unexplained processes have yet to be satisfied (Gingerich, 2011). Instead, it is usually just one side of a circular religious argument of which neither side can be proved to the other's satisfaction.

Most theologians of today seem to be as blind as the rest of us to the "invisible" (quotation marks because, at least very often, visibility is really a matter of attention (Van Veen, Krug, Schooler, & Carter, 2009); that is, it depends to a great extent on the condition of the observer: state of consciousness, alertness, physiology, conditioned attitudes and cultural vocabulary. In other cultures it is expected that the priest/shaman/medium will either counsel or heal with the help of the 'invisible' which they can see/hear/feel through ritual and state change, or facilitate such sensibilities in their supplicants (Hancock, 2006). Western scholars of religion, for the most part, see only what is printed in books or, superficially, fragments of whatever relics have been preserved in the formalized religions of our culture.

### **What is the role of theories?**

I believe that taking any sort of polarized position regarding empiricism vs. teleology or counseling vs. research, etc., proves to be a disservice both to our help-seeking clients and to our

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scientific endeavors. That said, Laungani's (2004) point about psychology's needing to respect its roots in philosophy and theory should be heeded, lest our discipline devolve into "cook-book recipes," superficial approaches from weekend seminars and hodge-podge practices borrowed from self-help books and self-styled New Age healers. I think it is (to at least some degree) advantageous for counselors to put aside theories when faced with the real-world issues presented by their clients; this allows them to use their intuition instead, which embodies all that they know, both theoretically and experientially. However, my assumption, in this judgment, is that the counselor has learned all the applicable theories so well that they *are* embedded in his or her subconscious. We should also consider Rychlak's (2000) admonitions to remember that the client is not some mechanical object, but must be considered ethically and within the perspectives of well established teleology. Therefore, with those caveats, I would agree with Strong (1991) that good counseling begins with valid underlying theory.

### **Necessary norms and standards**

#### **Values I hold as a scholar/practitioner.**

I draw on the knowledge and perspectives of my peers and predecessors while, at the same time, breaking new ground with my own original research. As scholar-practitioners, we can't have the emotional constituent bias our work. For example, recalling the confirmation hearings for the *Judge Sotomayor Confirmation Process for Supreme Court Justice* (2009), the Republican senators made a great deal of political currency out of Ms. Sotomayor's references to empathy and compassion, claiming that such sentiments would impair the objectivity of her decisions as a Supreme Court justice.

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What then-judge Sotomayor was referring to was the need for justices to realize that their decisions would directly affect people's lives -- who lives, who dies, who stays in prison, who gets the money, who keeps their homes, whether there will be air to breathe, clean water to drink -- really everything in our lives. The senators who attacked Sotomayor's statements claimed that a justice could be objectively 'fair' only if s/he paid no regard to the human consequences. I see it as my duty, as a scholar-practitioner in the field of psychology, to be ethical both to the human consequences of research and to maintaining the validity of the science involved.

### **Challenges I expect to face in retaining those values**

**Building theories, models and conceptual frameworks.** Anchin (2008) offers a “unification psychology” for reducing the differences in meaning and significance across the various fields of psychological research and practice. The author points out that manifesting this endeavor would require the cooperation of a whole community of researchers. My concern is that the task may prove to be so broad as to make such a unified study unwieldy and impractical.

Lukacs, et al. (2006) argue, seemingly, almost oppositionally to Anchin (2008), saying that it is pluralism in methodology and analysis that will give the most theoretically correct methods and results. The authors particularly advocate for multiple-hypothesis testing (contrast analysis) so that realistic results can be obtained. Ultimately, Anchin and Lukacs, et al., are not in conflict because they are addressing two different aspects of understanding.

Fischer, S. L. (2010) advocates for an “open context” in research so as not to get locked into a particular interpretation or mindset, as befits the practitioner of gestalt methodology that the author is. She points out that even gestalt (“taking the thing whole, just as it is”) is often cast into a cognitive structure, and that this is detrimental both to the client and also to the science.

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Williams (1991) critiques Smedslund's (2002) view of psychology as a science, pointing out that it begs the question ("psychologism"): it criticizes the traditional view while relying on its foundational premises. Williams thereby reminds me to check my own premises when presenting my results or critiquing others'.

**The nature of published research, and the publication process.** According to Pan (2008), the literature on a given topic may be qualitative or quantitative research, or it may be the statement of a theory or a recommended methodology. The reviewer of such literature may be a journal editor, an anthologist or a researcher compiling support for his own research, and must evaluate each article critically, since errors of theory, methodology or data analysis may have slipped through the peer-review or editorial process.

Ortinau's paper (2010) discusses the process of publishing scientific articles, focusing on marketing targets. The author offers several key objectives to this task: the article should convey a clear and professional image, it should specifically address the editorial criteria of the target journal, and it should honor the relevant research and editing traditions. Finally, the article should clearly state its own limitations in terms of methodology, generalizability and analytical methods.

**The state of applied practices in counseling, consultation and research.** Bloor (2010) gives the example of the revelation that addicts were sharing needles in treatment centers. This discovery caused conflict in the caregivers because being caught using drugs was grounds for expulsion, but such expulsion would raise the risk of spreading HIV among the general population instead of in the controlled environment of the center. The author advocates for

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choosing the greater good rather than a politically correct “zero tolerance” policy. I agree with this viewpoint.

Laungani, P. (2004) argued that psychology, in attempting to be seen as a science, has lost some of its meaning by moving away from its philosophical roots, but that recent trends in psychology have moved too much away from the scientific rigor that gives the discipline validity. I see my own task as balancing the two sides by being clear on my philosophical foundations for theorizing, and then using precision and diligence in conducting my research.

Novoa & Hunt (2009) explore conflicts which arise from the practice of enhancing recall of childhood events, producing synaesthesia. The authors point out that this method very often produced false memories which disrupted the lives of the clients and their families. These findings were augmented by Schooler & Engstler-Schooler’s (1990) research.

**The cultural norms in the field of psychology in general.** Church (2010) elaborates on the different approaches that have to be taken for disparate cultures such as indigenous and urban populations, and also among the various psychological disciplines from which to study them; e.g., evolutionary, cross-cultural, inter-species and cultural psychologists). Church proposed an integration of these various perspectives and further research that could assist in cross-cultural and cross-discipline understanding.

In Gingerich, O. (2011), we find, by contrasting the beliefs of Darwin and Kepler, a rationale to nature and the universe based on religious premises while conforming to mathematics. Miller (2004) points out that it is very common for scientists and researchers to have spiritual or religious perspectives without experiencing conflict because of that. My own view is that we can never be free of the perspectives of our cultural conditioning, social

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traditions and the prevailing zeitgeist, even when we rail against them. For that reason, I take it as one of my challenges to be aware of my beliefs and biases and take them into account in my research and writing.

### **Current trends in the field of psychology**

#### **Gestalt Psychology**

Gestalt psychology came about, in Germany, partly as revolt against Wundt's methods (Schultz & Schultz, 2008). Gestalt psychology, as expressed by Wolfgang Köhler, resented the "elementistic" nature of Wundt's philosophy. Gestalt brought back the concept and usage of consciousness that behaviorism had discarded as unmeasurable and therefore useless, or needing to be reduced to its elements. Gestalt psychologists accused Wundt of ignoring the fact that the whole is more than the sum of its parts, although this was, to at least some degree, unfair in light of Wundt's ideas about creative synthesis. Although Gestalt is no longer considered to be a "cutting edge" trend in psychology, it remains in wide use and encourages research along intuitive lines; its limitations for scientific progress lie mainly in its somewhat weak theoretical basis and difficulty in objectifying results (Fisher, 2010).

#### **Humanistic Psychology**

the humanistic psychology movement, spearheaded by Abraham Maslow and Carl Rogers, saw behaviorism as too shallow and narrow to fully reveal the human personality, and psychoanalysis as being too fixated on sexual or emotional fixations. The cornerstones of humanistic psychology are Self-actualization and consciousness. To a great extent, humanistic psychology committed suicide as an independent movement – its leaders conceded that they had

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not left a lasting or deep impact on the field of psychology. This was due to three main factors: 1) its adherents were predominantly therapists, out in the field working with clients, and not at the universities publishing papers – so their discipline did not get the kind of recognition that others did; 2) humanistic psychology missed its chance to be a remedy for what was missing in behaviorism and in psychoanalysis, since these two fields were already transforming and reacting to revolutions from within; and 3) some of the important contributions of humanistic psychology were folded into the emerging cognitive psychology (Schultz and Schultz, 2008).

### **Psychedelics**

The Multidisciplinary Association for Psychedelic Studies (MAPS) sponsors experimental studies for legitimizing the use of psychedelics and marijuana in therapy. One example which is gaining attention is the use of MDMA (Ecstasy) in the treatment of PTSD, not only in soldiers returning from war, but also victims of sexual assault, violent crimes and tragedy (MAPS: MDMA Research, 2010). In 1986, MAPS began to sponsor medical and psychological research of psychedelic methodologies, and lobby the government for permits. Today there are numerous studies of psychedelics, MDMA and marijuana showing great promise, although the U.S. lags behind Europe in enabling such research. One obvious hindrance to scientific progress in this area of research has been the government's over-reaction to the public's propensity to abuse these substances (Lutz, 1997).

### **Cognitive Psychology**

According to Schultz & Schultz (2008), cognitive psychology's roots go back to the Greek philosophers and to nineteenth-century British science theorists. Wundt originally

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focused on the creative process of the mind, as did (in their own ways) the structuralists and the functionalists. Despite belonging to the behaviorist school, Guthrie protested that for at least some human stimuli, mentalist or cognitive processes had to supplant purely mechanical paradigms. Tolman, Carnap, Piaget and the gestalt movement also opened the door for the cognitive movement to emerge. Miller did not want to over-define cognitive psychology, and set up his institute “not in opposition to anything” but to explore the workings of the mind. Neisser lumped in such mental processes as sensation, perception, memory, thought, symbol manipulation and problem solving, but he also did not want to over-confine the discipline, and looked for ways to take it into the real world. As opposed to behaviorism, cognitive psychology wants to understand knowing and not just response to stimuli and, similar to gestalt, assumed that individuals had an innate tendency to organize conscious experience (Schultz & Schultz, 2008). The principles of cognitive psychology have been useful in the study of neuroscience, artificial intelligence and organizational management, to name a few.

### **Positive Psychology**

Dr. Park (Laureate, 2005) explained that positive psychology complements other fields by, instead of focusing on ways to fix things that are broken, offering positive outlooks and alternatives, and then showing how much more could be accomplished from positive attitudes and visions than from merely quelling fears and other negative emotions. As comforting as this relatively recently formulated study sounds, it draws potential criticism for being scientifically ‘fuzzy’ and having a tendency to sweep problems under the rug.

### **Modernist and Postmodern Psychology**

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According to Dr. Gergen (2005), modernist psychology could be seen as analogous to the Enlightenment period of European culture, in that calls sacrosanct ideas into question in favor of rationality, secularism, objectivity and progress. He also points out ‘truth’ as a value of modernism, but then goes on to say that postmodern psychology sees truth as being relative, according to cultural differences in describing reality. A significant breakthrough of postmodernism is that therapists no longer need to think in terms of “mental disease” as necessarily a negative, but could rather allow for positive differences in cognitive and perceptual organization. The modernist approach to counseling problems would be to create a “professional distance” from the client in order to analyze them and their situation as a problem or disease to be remedied. In contrast, the postmodern therapist would probably treat the client and their situation as an “alternative reality” and look for ways in which the client could accept their condition as their *lifestyle*.

### **My vision of psychology**

#### **My specialization area**

Within the main psychological branch of Cognitive Psychology, I propose a sub-branch which, for now, I am naming *Esoteric Psychology* due to its roots in ancient mystical traditions and also to its connections to such modern traditions as shamanism, sorcery, yoga, Zen Buddhism and occultism. This field of study is not intended as some sort of compendium of these arts and traditions, but an abstraction of the ideas and practices which foster access to fabled higher states of consciousness, including what have been referred to as enlightenment and cosmic consciousness, formulated as a teachable and practiceable system of scholarship. I intend

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for this branch to draw on the best practices of the existing branches of psychology, as well as expand them with the new ideas I mentioned.

One of my interests is whether psychosis can be studied and treated as if it were an induced non-ordinary state or set of states; that is, whether a patient who has been diagnosed as having a form of durable or permanent schizophrenia can be conditioned or trained to shift and control their states in something like the ways that shamans and sorcerers do, rather than with 'traditional' Western therapies like antipsychotic drugs, electroshock therapy, etc. Then my hypothesis would be: At least some individuals with some forms of schizophrenia can be made self-correcting (independent of psychiatric supervision) by being given tools and methods usually associated with shamanism or sorcery.

Useful qualitative methodologies like Direct Observation and Unstructured Interviewing, are described in Trochim & Donnelly (2008), and also in Bond, et al. (2009) and Friczewski (2010), whereas Kirchner (2010) would be a good source for quantitative and combined methodologies in this area of research. Studerus, Gamma, & Vollenweider (2010) provide a more objective quantitative scale (OAV) for altered states. A classic source for suitable quantitative methodologies is the longitudinal ADD study used widely in our statistics classes (Howell, Heussy, & Hassuk, 1985). A good source for a methodology quantifying qualitative research was Thiry (2009).

Another area is the difficulty people have had in reporting on phenomena experienced during nonordinary states, once they had returned to normal, likely due to loss of access to centers in the brain which are active during such states but not in ordinary consciousness (Dijkstra & Misirlisoy, 2009; Novoa & Hunt, 2009; Bokde, et al., 2010). I plan to incorporate numerous techniques, such as in Bond, et al. (2009), for improving dream and trance recall.

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I can say that my investigation is of the supernatural -- the invisible may indeed be available to those who, first, have the internal 'vocabulary' (not necessarily in words) and secondly, have a combination of, say, passion, reverence, humility and spiritual power for some miraculous encounter (Pagels, 1989). We should not be surprised that such conditions can be attained, since so many examples have been reported, not all of which have been explained away.

I intend to objectify the internal material by classifying it with the help of traditional spiritual disciplines (e.g., Zen, Taoism, Vedanta and “the fourth way”) along with the insights of Cognitive Psychology, Gestalt, and Jungian distinctions. Some good help in methodology can come from papers like Kirchner (2010), which synthesizes a long-term psychiatric study using LSD-25. My paradigm is that each distinguishable (how that could be done might be the subject of another paper, or part of the methodology section of my thesis) state of non-ordinary consciousness has its own intelligence, its own perceptual senses and its own “world-shape” if I may coin that phrase; the psychometric evaluatory system of Studerus, Gamma, & Vollenweider (2010) could be helpful here. Of course I am thinking of states of religious ecstasy in which visitations, miracles, healings and prophecies take place or, on the darker side, states home to demons, ghosts and monsters – for the purposes of my study, it will not be necessary (nor possible) to determine if these inhabitants or phenomena are real or imagined. What matters is only that the perceptions and experiences have identifiable elements for those levels, and some form of consistency. What will make this most interesting to me is whether such states can be reproduced (or retraced) at will, thereby satisfying some of the requirements of the scientific method, such as is enumerated in Rosenberg (2006).

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A preview of my planned methodology can be found in the dreamwork of Jung (Dixon, 2005; Giannoni, 2003) and approaches like Gestalt (Murray, 1991), wherein each symbol and character in a dream can be ‘interviewed’ for its perspective, role, and insights about the dreamer, or about someone or something of concern to the dreamer; papers like Quevedo (2009) offer insights as to methodology. Going further, we can examine the transformations which occur in passing from one dream to another, or from one dream state to another – particularly lucid characteristics – and also how dreamers are trained not only to recall minute details of their dreams, but to make ‘adjustments’ within their dreams and also stay aware, in some way, during the shifts and changes of level; for example, when falling asleep within a dream, “waking up” within a dream or, as happens in many instances, of carrying out specific tasks during dreaming, tasks of will and tasks of psychic skill and power.

I can think of many ways in which this type of research can prove useful, both to individuals and to the research community. On the individual level, it could revolutionize therapies for many types of psychological dysfunction and also benefit those interested in reaching their highest potential. In terms of science, this study could open up whole new ways of seeing and treating cognitive issues, gradations of perception and understanding, and breakthroughs in education and learning disorders. It might even give us ways to intentionally tap fountainheads of genius.

### **How each facet of psychology can be strengthened**

**Conceptual frameworks.** Benton (2010) explored the conceptual divisions between Wallace and Darwin, on the roles of race, gender and eugenics, in endeavoring to find common ground on the future of genetics.

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By means of the continuing evolution of psychology as a science of ideas and paradigms, we scholar-practitioners can design increasingly better research foundations.

**Model and theory building.** Anchin (2008) believed that a unified theory could be developed to integrate theory and philosophy of theory with the practical considerations of psychotherapy practice and adherence to logical underpinnings guiding that practice. I see the most effective idea as being to recognize what the models and theories, on a given subject, have in common with each other, and use those commonalities to integrate my research plan, but then to acknowledge the specific features of each perspective in order to make full use of it.

**Research.** Bokde, et al. (2010) advanced a field of research which particularly interests me, in their cognitive study of amnesia and altered brain activation. Using various types and rhythms of altered-brain activation, they were able to map memory locations to a more precise degree than before, and also to advance therapeutic methods for restoring memory in amnesia victims. Kirchner (2010) and MAPS (2010) exemplified the ground-breaking research that is taking place in the revival of psychedelics as research and therapeutic tools.

**Applied practices.** Bloor (2010) provided a discussion of the socioethical responsibilities of the practitioner, focusing on the positive results that researchers and therapists should seek to attain. Rosnow & Rosenthal (1989) explore the strengths and weaknesses of traditional statistical methods. Methodologists like Studerus, Gamma, & Vollenweider (2010) are providing structure and precision to psychedelic and cognitive research.

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### References

- Anchin, J. C. (2008). Pursuing a unifying paradigm for psychotherapy: tasks, dialectical considerations, and biopsychosocial systems metatheory. *Journal of Psychotherapy Integration*: Vol. 18, No. 3, 310–349 1053-0479/08/. DOI: 10.1037/a0013557.
- Auletta, G. (2007). Science, philosophy, and religion today: Some reflection. *Theology and Science*, 267-288.
- Bednar, D. A. (2007). Seek learning by faith. *Ensign*, p. 60-68, accessed on 2-11-2011 at: <http://lds.org/ensign/2007/09/seek-learning-by-faith?lang=eng>
- Benton, T. (2010). Race, sex and the 'earthly paradise': Wallace versus Darwin on human evolution and prospects. Wiley-Blackwell Publishing: *Sociological Review*.
- Bloor, M. (2010). The researcher's obligation to bring about good. Sage Publications: *Qualitative Social Work: Research and Practice*, Vol 9(1), Mar, 2010. pp. 17-20. ISSN: 1473-3250 (Print), 1741-3117 (Electronic)
- ~~Bokde, A. L. W.; Karmann, M.; Born, C.; Teipel, S. J.; Omerovic, M.; Ewers, M.; Frodl, T., Meisenzahl, E., Reiser, M., Möller, H. J., & Hampel, H. (2010). [Altered brain activation during a verbal working memory task in subjects with amnesic mild cognitive impairment.](#) *Journal of Alzheimer's Disease*, Vol 21(1), 2010. pp. 103–118.~~
- Bokuhen, A. (2006). Heisenburg meets Kuhn: Close theories and paradigms. *Philosophy of Science*, 90-107.
- Bond, K., Ospina, M. B., Hooton, N., Bialy, L., Dryden, D. M., Buscemi, N., Dusek, J., Shannahoff-Khalsa, D., & Carlson, L. E. (2009). Defining a complex intervention: the development of demarcation criteria for “meditation” [Electronic version]. *American*

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Psychological Association: *Psychology of Religion and Spirituality*, Vol. 1, No. 2, 129–137, DOI: 10.1037/a0015736.

Chin, J. M., & Schooler, J. W. (2008). Why do words hurt? Content, process, and criterion shift accounts of verbal overshadowing. *European Journal of Cognitive Psychology*, 20(3), 396–413. DOI: 10.1080/09541440701728623

Church, A. T. (2010). Current perspectives in the study of personality across cultures.

*Perspectives on Psychological Science* 2010 5: 441. DOI: 0.1177/1745691610375559

Dar, R., Serlin, R. C., & Omer, H. (1994). Misuse of statistical tests in three decades of psychotherapy research. *Journal of Consulting and Clinical Psychology*, Vol. 62. No. 1.75–82

Dawkins, R. (1997). Is science a religion? *The Humanist*. Retrieved from

<http://www.thehumanist.org/humanist/articles/dawkins.html>

Dias, P. (2010). Is science very different from religion? A palenyanian perspective. *Science & Christian Beliefs*, 43-55.

Dijkstra, K., Misirlisoy, M. (2009). Recognition accuracy for original and altered verbal memory reports in older adults. *The Quarterly Journal of Experimental Psychology*, Vol. 62(2), Feb, 2009. pp. 248-256

Dixon, Paul W. (2005). An extension of Freud and Jung's theory of the relation of dream states to schizophrenia. *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues*, Vol. 24(1), Spr. 2005. pp. 4-23.

Fiore, S. M., & Schooler, J. W. (2002). How did you get here from there? Verbal overshadowing of spatial mental models. *Applied Cognitive Psychology*, 16(8), 897-910. Retrieved from Academic Search Premier database. (AN 11818448)

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Fischer, S. L. (2010). Interpreting interpretations: thinking (de)constructively about Gestalt.

*Gestalt Review*, 14(1):2-7.

Frick, R. W. (1996). The appropriate use of null hypothesis testing. *Psychological Methods*, Vol.

I, No. 4, 379-390

Friczewski, F. (n.d.). Ayahuasca, salutogenesis and the need for “ecological” approaches.

Retrieved Nov., 2010, from

[http://www.neip.info/html/objects/\\_downloadblob.php?cod\\_blob=995](http://www.neip.info/html/objects/_downloadblob.php?cod_blob=995)

Geertz, Clifford. 1993. “Religion as a cultural system.” In Clifford Geertz, *The interpretation of cultures: Selected essays*. London: *Fontana Press*, pp. 87-125.

Gergen, K. (2005). History and systems of psychology: postmodern psychology [video].

Laureate Education, Inc.

Giannoni, Massimo. (2003). Jung's theory of dream and the relational debate. *Psychoanalytic*

*Dialogues*, Vol 13(4), 2003. pp. 605-621.

Gingerich, O. (2011). Kepler and the laws of nature. *Perspectives on Science & Christian Faith*,

63(1), 17-23.

Gross, Charles (2010). Alfred Russell Wallace and the evolution of the human mind. *The*

*Neuroscientist*. DOI: 10.1177/1073858410377236

Hancock, Graham (2006). *Supernatural: meetings with the ancient teachers of mankind*. New

York: The Disinformation Company, Ltd.

Howell, D. C., Heussy, H. R., & Hassuk, B. (1985). Fifteen-year follow-up of a behavioral

history of attention deficit disorder. *Pediatrics* Vol.76, No. 2, Aug. 1985.

Irzik, G., & Nola, R. (2009). Worldviews and their relation to science. *Science & Education*,

18(6/7), 729-745. doi:10.1007/s11191-007-9087.

## A PERSONAL VIEW OF THE SCIENCE OF PSYCHOLOGY

- Judge Sonia Sotomayor confirmation process. (2009). Retrieved July 7, 2009 from <http://www.c-span.org/Supreme-Court-Sotomayor-Senate-Confirmation-Hearings.aspx>
- Kirchner, Katharina (2010). LSD-supported psychotherapy: Effects on daily life and long-term changes [master thesis in psychopathology]. University of Zurich: *Institute of Psychology*.
- Laungani, P. (2004). Some unresolved issues in philosophy and psychology: The implications for therapy. *Counseling Psychology Quarterly*, 17, 107-123.
- Lehrer, J. (2010, December 13). The truth wears off. *The New Yorker*, 52-57.
- Lukacs, P. M.; Thompson, W. L., Kendall, W. L., Gould, W. R., Doherty, P. F., Burnham, K. P., & Anderson, D. R. (2006). Concerns regarding a call for pluralism of information theory and hypothesis testing. *Journal of Applied Ecology*, Apr2007, Vol. 44 Issue 2, p456-460. DOI: 10.1111/j.1365-2664.2006.01267.x
- MAPS (2010). MDMA research. Retrieved from <http://www.maps.org/research/mdma/> September 16, 2010.
- Mahrer, A. R. (2000). Philosophy of science and the foundations of psychotherapy. *American Psychologist*, 55, 117-1125.
- Miller, K. R. (2004). Science and Religion. Retrieved February 12, 2011 from <http://www.actionbioscience.org/evolution/miller.html>
- Moore, J. (2010). Philosophy of science with special consideration given to behaviorism as the philosophy of the science of behavior. *The Psychological Record*, 60, 137-150. Retrieved from PsycINFO.
- Murray, Edward J. (1991). Does Dream Work Work?; *PsycCRITIQUES*, Vol 36 (7), Jul, 1991. pp. 612-613.

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- Novoa, D. C., & Hunt, H. T. (2009). Synaesthesias in context: A preliminary study of the adult recall of childhood synaesthesias, imaginary companions, and altered states of consciousness as forms of imaginative absorption. *Journal of Consciousness Studies*, Vol 16(4), Apr, 2009. pp. 81-107.
- Ortinou, D. J. (2010). Writing and publishing important scientific articles: A reviewer's perspective. *Journal of Business Research*, 0148-2963/\$.  
doi:10.1016/j.jbusres.2010.02.002
- Ouspensky, P.D. (1949). In search of the miraculous. Harcourt Brace & World, Inc.
- Pagels, Elaine (1989). The gnostic gospels. New York: Random House: Vintage books.
- Pan, X. (2008). Preparing literature reviews: Qualitative and quantitative approaches. Pyrczak Publishing
- Park, N. (2005). History and systems of psychology: Positive psychology [video]. Laureate Education, Inc.
- Quevedo, D. J. (2009). Psychospiritual integration of an ayahuasca retreat experience (a dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Transpersonal Psychology). Palo Alto, California: *Institute of Transpersonal Psychology*.
- Rosenberg. (2006). *Philosophy of Science: A contemporary introduction (2nd ed., electronic)*. New York: Routledge Taylor & Francis Group, Chapter 4.
- Rosnow, R. L., & Rosenthal, R. (1989). Statistical procedures and the justification of knowledge in psychological science. *American Psychologist*, **44**, 1276-1284.
- Rychlak, J. F. (2000). A psychotherapist's lessons from philosophy of science. *American Psychologist*, **55**, 1126-1132.

## A PERSONAL VIEW OF THE SCIENCE OF PSYCHOLOGY

- Schooler, J. W., & Engstler-Schooler, T. Y. (1990). Verbal overshadowing of visual memories: Some things are better left unsaid. *Cognitive Psychology*, 22(1), 36-71. doi: 10.1016/0010-0285(90)90003-M
- Schultz, D. P., & Schultz, S. E. (2008). *A History of Modern Psychology* (Ninth Ed.). Wadsworth Cengage Learning.
- Smedslund, J. (2002). From hypothesis-testing psychology to procedure-testing psychology. *Review of General Psychology*, 6, 51-72.
- Strong, S. R. (1991). Theory-driven science and naïve empiricism in counseling psychology. *Journal of Counseling Psychology*, 38, 204-210.
- Studerus, E., Gamma, A., & Vollenweider, F. X. (2010). Psychometric evaluation of the altered states of consciousness rating scale (OAV). *PLoS ONE*: Vol. 5, issue 8, Aug. 2010, e12412.
- Thiry, B. (2009). Exploring the validity of graphology with the Rorschach test. Hogrefe & Huber Publishers: *Rorschachiana* 30, 26–47; DOI: 10.1027/1192-5604.30.1.26.
- Trochim, W. M. K., Donnelly, J. P. (2008). *The research methods knowledge base* (3rd Ed.). Cengage Learning: Atomic Dog.
- Van Veen, V., Krug, M. K., Schooler, J. W., & Carter, C. S. (2009). Neural activity predicts attitude change in cognitive dissonance. *Cognitive Psychology*, Nov 2009. Vol. 12, Iss. 11; p. 1469.
- Williams, R. N. (1991). The pseudofundamental in psychology: Psychologic and psychologists. *Psychological Inquiry*, 2, 371-374.