

Psychology Honors Program
Psych 2991-4996
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Spring 2015

Welcome to the psychology honor's program. This course is designed as a mini tour through the field of psychology. Where did the field come from? How did the field mature into the subdisciplines that we have today? What counts as evidence in psychology? What methods do we use to secure the evidence and why? Finally, how do we build a base of understanding about the human condition?

This semester we will be discussing a "hot" and often controversial subject: religion. Throughout history, the stories of the Bible have been used to explain human foils and triumphs. Masses appeal to religion to support their moral choices and to justify pacts or wars against outgroups. In fact, in America alone, over 80% of the population adheres to some religious affiliation. Across the globe, that number is 84%. Religion is thus a broad area that offers its many followers a world view.

In the past, our class has delved into related topics like human morality – asking whether we are born as prosocial creatures or are so swayed by culture that we literally need to *learn* to be moral. And last semester we used current events as a platform to examine prejudice and stereotyping – speaking to questions about the formation of in-groups and out-groups and the way science understands the categorization of others to protect ourselves. We tried to understand the riots in Ferguson and the response that has laid bare the deep seeded racism in America. In many ways, the scientific study of religion is a natural extension of those topics. One could argue that religion is the quintessential study of the human condition—one that embraces morality, prejudice and so much more. Yet, religion is not science and it has rarely been studied with a scientific microscope. In the circle of science, religion takes us from observation through generalization to a broad and systematic belief system, but it never tests that belief system with an eye towards refuting it. Rather it relies on faith. In science, we move from theory towards prediction and hypotheses to test our theory and to endorse or reject it based on the evidence.

The differences in the two systems often create a friction between religion and science that is palpable. Witness this Jon Stewart episode where people were interviewed about their stance on science (<http://www.upworthy.com/the-most-hilarious-attack-on-science-ive-ever-seen>). Isn't it interesting that many damn evolutionary theory in favor of creationism and question climate change even though they want the latest scientific discoveries to be used in treating their illness? Tensions like these are rampant and have been so for centuries.

The question then is whether there can be a reconciliation between scientific belief and religion. The father of modern philosophy answered with a resounding, "YES." A devout Catholic, Descartes, devised an elegant solution to the natural tension by positing a mind-body divide. He argued that the body (including the brain), operated by scientific dictates while the mind, albeit connected to the body, did not. Thinking of the body (or brain) and the mind as separate entities allowed science to flourish without diminishing trust in constructs like god, spirit, and soul. God or our spirituality could be a product of mind and soul while the brain and body would be governed by laws of science.

For many years –centuries in fact, the mind-body divide was the norm and it left us with an uncomfortable, but tolerable relationship between science and religion. In the past 2 decades, however, that relationship has been challenged. As we entered the decade of the brain and our techniques for studying brain science became more sophisticated, the mind-body division seemed less plausible. Perhaps the mind and brain are one and both can be explained by the same mechanisms – those of science. Under these new conceptions, how do we study mind, soul and spirituality? Will we find a god gene? Is there some biological root to belief? Might age-old practices like prayer confer any protective advantages?

The last decades have witnessed a number of books debating the psychological reality of the mind. Professor Patricia Churchland (1986) began the crusade when she argued compellingly that there was no mind-body distinction. Using a purely reductionistic approach, she holds that as we learn more about the brain, we will need to “drastically revise concepts like free will, thought and consciousness.” In the same year, Professor Richard Dawkins, an evolutionary biologist, wrote a treatise against the mind-body distinction in his book, *The Blind Watchmaker*. Later, his well-received book, *The God Delusion* argued that a “supernatural creator almost certainly does not exist and that religious faith is a delusion” (Wiki). It is worth noting that these books were published even before we could peer into the brain with more sophisticated fMRIs, with Diffusion Tensor Imaging and MEGs (Magnetoencephalography). What might we reveal next?

With this as a backdrop, we are privileged to read a book by a colleague and friend, Dr. Julien Musolino from Rutgers University, who takes a fresh look at the data in 2015 and who reexamines the status of the mind-brain distinction and its impact on the existence of a soul. He is direct in speaking to the mind-body problem and its relationship to soul and to spirituality. What are the consequences of this book for religious belief? As we read Julien’s book along with other articles in the psychology of religion, we are perhaps asking the key question about religion and psychology.

While this book will be one anchor in our study of religion (really of soul and spirituality), we have also gathered a potpourri of articles that speak to different ways in which psychology could focus a scientific lens on the study of religion. One could argue, for example that it does not matter if we can “find” a soul or any other seat of religion or god in the brain. The very fact that we harbor beliefs about god, soul and religion is enough. That belief still regulates many of our thoughts and our behaviors. And our identity in terms of religion has large consequences for understanding human interaction. In this class we take this view seriously. Because the field is just beginning to take shape, we offer a kind of speed dating approach to many of these questions and look at how we might define religion, how we can examine the intensity of belief, how our belief systems might impact our health and well being, etc. Here our job is to ask how we might do a scientific study of these ever-present constructs that govern so much of our everyday life. In the articles we have assembled for you, you will see illustrations of each of our Tuesday topics while attempting to get some purchase on this area of study. Finally, as the *piece de resistance*, you will have the opportunity to meet Dr. Musolino who will discuss his book and the conclusions that we reached on these topics throughout the term.

In the first semester of honors, we address questions about the human condition by examining several techniques in experimental design and by seeing these in action as we explored the area of the adolescent brain within the context of the true experimental design.

In the second semester, we revisit some of the methods we studied with a new eye. As noted last term, our methodology has in large part been shaped by reliance on lab research, assumptions of truth and thus on the golden temple of true experimental design. This semester

we add to our methodological arsenal. Moving beyond the classic experimental design, we investigate the ways in which the true experimental design was altered to meet the demands of real world research. And what can be more real world than the study of some aspects of religion or spirituality? Starting with a review of the true experimental design with its emphasis on prediction and control, we enter the “dark side” of quasi- experimental design – through observation, questionnaires, survey research and naturalistic designs. In short, we enter the messiness of the real world. We ask whether it is possible to learn about the human condition scientifically while still preserving ecological or face validity. What we will see as we read these articles is the struggle we face in psychology to balance the cleanliness of lab design with its ability to isolate one factor for study and some of the “chaos” of the real world in which multiple factors often define who we are and how we will behave. This struggle surfaced in the first term when the logico-mathematical scientist met the romanticist and narrative scientist in the Bruner article. This term, we enter a relatively uncharted domain and re-examine the assumptions we bring to the study of psychology. We will ask about the optimal method – or in this case, methods – that the scientist can bring to bear on an issue so near and dear to our hearts.

The class is organized as two classes in one. The Tuesday meetings offer a basic course in research methodology demonstrating classic and new designs that allow us to make progress across all of the subdisciplines within psychology. On Thursday, we will sample some of the articles that illustrate these methods within the context of the study of religion. We will read articles, evaluations and even a case study on issues that touch on questions of torture, fairness and disgust. I hope we will also notice how we frame our discussions. There are many questions that could be asked with respect to this topic, but only some have entered into the scientific domain. Why? What questions does science deem to ask? Are these the right questions to ask of religion? What might you add and how would you frame the major questions?

Finally, we end the course with reflection. In the new age of psychology, we can ask what our science of psychology looks like, how it is changing and whether psychology can become united by a common foundation based on philosophical and methodological choices about how to best study the factors that make us human. Indeed, we will see that there is a new movement afoot that celebrates more complex interdisciplinary studies within the context of what the APA Monitor has called Big Science.

All 2991 and 3991 students must attend both the Tuesday and the Thursday lectures/discussions. 4991 and 4996 students **must** attend the Thursday classes. These students also become the elder statespersons who will be there for research and social support.

A quick caveat: We could not survey everything in the literature that was both interesting and that touched on religion as a keyword. So we picked those topics that lent themselves to methods that we wanted to illustrate from the Tuesday classes. Since there were no overarching theories of the field at this time, we took the liberty of giving you a sampling. Your input for other ideas or papers is welcome! Just make sure that whatever you pick is even handed.

Caveat 2: Our goal is NOT to change or challenge anyone’s system of belief. It is only to use a controversial topic to expose the questions of interest and to ask how our methodologies can explore these questions.

Requirements:

Class Meetings: The class meets on Tuesdays and Thursdays from 11:00-12:20 in Weiss Hall 711. Students are expected to attend all classes and to have the reading assignments and paper assignments completed **before** the start of class. “Juniors” (2991/3991 students) attend both Tuesday and Thursday classes. “Seniors” (4991/4996 students) **must** attend the Thursday classes. The syllabus that follows has both Tuesday and Thursday reading assignments.

Blackboard: Everyone must use Temple e-mail accounts to participate in this course. When you register for the course, you will immediately become a member of the class listserv account and will be eligible to look at the class blackboard. You access **blackboard** by going to tuportal.temple.edu and by clicking on blackboard. Once you reach this site, you will need to enter your user name and your password. This then gives you access to this class online. For the syllabus, goals, end-of-semester evaluation forms and philosophy in the course, look at the buttons on Blackboard under “Course Information.” Under the button labeled “Content” you will find electronic copies of additional readings. Under External Links, you will find other websites useful for your studies. Finally, the journal synopsis forms appear under “Assignments.”

Discussion postings:

All discussion comments or questions from the upcoming Thursday class are to be **posted the Tuesday before class (by 8 am)** to assist the discussion leaders for that week. This means you should read the Thursday material by Tuesday morning to post provocative questions and comments. This posting and familiarity with all class postings will be considered in your class participation grade.

Discussion leaders, please email your questions for the discussion by Wednesday night at 5pm to Kathy & Ashley. All students will participate as discussion leaders for particular weeks. All are expected to be familiar with the articles, but discussion leaders should dive in more depth by gathering additional relevant information about the day’s topic (articles, news, etc) as they prepare to lead the class.

There are required texts for this course:

Rosnow, R. and Rosenthal, R. (2013). *Beginning behavioral research*. 7th Ed. Saddle River, NJ: Prentice Hall. (R & R)

Rosnow, R., & Rosnow, M. (2012). *Writing papers in psychology: A student guide* (9th ed.). Pacific Groves, CA: Brooks/Cole.

Musolino, Julien (2015). *The soul fallacy: What science shows we gain from letting go of our soul beliefs*. New York: Prometheus Books (JM). (This book will be available in hard copy at the bookstore)

Highly Recommended (especially for those unfamiliar/need refreshers on APA style):

APA (2009). *Publication manual for the American Psychological Association* (6th ed.). American Psychological Association.

Grading: 2991 and 3991 students will have a midterm, a final, two journal synopsis papers for this class as well as being judged for class participation and a final oral presentation. 4991 and

4996 students will be graded both from their advisor and for class attendance and participation and for their final oral presentation. 4996 students who apply for TURF presentations can have their TURF presentation count as their final presentation.

Midterm: 20%

Final: 20%

Paper 1: 15%

Paper 2: 15%

Class participation: 15% for all students and includes discussion posts.

Final oral presentation of research project: 15%

Important: Now that 2991 is recognized as a writing intensive course it is imperative that you not only write, but expect to rewrite all paper assignments until they are excellent samples of scientific writing.

Note: Honors is a program that is by invitation only. Students must maintain a 3.5 cumulative average to stay in the program. Further, if for any reason student performance is deemed unacceptable with respect to class requirements or to lab requirements, they can be asked to leave the program. Reaching us:

My office hours are from 12:45 to 1:30 in 316 Weiss Hall after class on Tuesdays and Thursdays and by appt. I can also be reached by phone at my office phone, 215-204-5243 or at my lab phone in Ambler 267-468-8610. My e-mail address is khirshpa@temple.edu. Ashley will be available on Tuesdays and Thursdays from 9:30-10:30 in 555 Weiss Hall. Her email address is ashdrew@temple.edu

Note: The syllabi, forms for assignments and some interesting links to others sites can be found on blackboard and on my website - <http://astro.temple.edu/~khirshpa/>

Psychology Post Test Requirement

All capstone students are required to take a 56-item multiple-choice test available online.

Please take the exam some time in mid to late April, before the last day of classes. It will take no more than 1-hour to complete the test. This test is not graded; the number of questions you get right or wrong will not affect your grade in any way. The test is used by the Psychology Department to evaluate how well students learn about Psychology during their time at Temple.

Disability Statement:

Any student who has a need for accommodation based on the impact of a disability should contact me privately to discuss the specific situation as soon as possible.

Statement on Academic Freedom: Freedom to teach and freedom to learn are inseparable facets of academic freedom. The University has adopted a policy on Student and Faculty Academic Rights and Responsibilities (Policy # 03.70.02) that can be accessed through the following link: http://policies.temple.edu/getdoc.asp?policy_no=03.70.0

Psychology Honors Syllabus
Professor Hirsh-Pasek
Spring 2015

Week 1

January 13: Introduction to the class

- What science can and cannot address
- **The Matrix and beyond: Questions of reality vs constructed reality**
- Where knowledge about the human condition meets science
- **Expectations: What makes honor's students special**
- **Reflection, inquisitiveness, active thinkers not passive learners**
- **Where you should be if you are in 2991/3991/4991 & 4996**
- **The Tuesday course outline**

Reading:

Rozin, P. (2009). What kind of empirical research should we publish, fund and reward?
Perspectives on Psychological Science, 4, 435-439.

January 15: Introduction to the Psychology of Religion

Let's dig right in. Can religion and science live in harmony? Well – it kinda depends on how you define religion and how you define science. This question has been hotly debated in the news, at the dining room table and in the scientific and philosophic literature. Today we join those conversations. We start by reading Musolino's first chapter which sets the stage for his argument against the soul and hence for any separate home for spirituality. We also read a 2005 piece from the APS Observer who sets the stage for a harmonic co-existence. Finally, we look at the lead article from a special issue on the psychology of religion and health to illustrate one area in which researchers have gotten a handle on an interesting and potentially fruitful collaboration between the understanding of religious beliefs and health outcomes within the context of psychological science. As we read these works, we should also ask – what do the authors mean by the global terms like religion, soul, spirituality. To study these constructs, we would need to operationalize them and to approach the questions with clarity of purpose and definition.

Readings:

Musolino, Julien (2015). *The soul fallacy: What science shows we gain from letting go of our soul beliefs*. New York: Prometheus Books. **Forward, Preface and Chapter 1; pp. 1-39.**

Leshner, A. (2005) Science and religion should not be adversaries. APS Observer
<http://www.psychologicalscience.org/index.php/uncategorized/science-and-religion-should-not-be-adversaries.html>

Miller, W. & Thoresen, C.E. (2003). Spirituality, religion and health: An emerging research field. *American Psychologist*, 58(1), 24-36.

Week 2

January 20: Reviewing assumptions behind the true experimental design.

Last term we discussed the *Temple* of the true experimental design – a beautiful monument brought to us through John Stuart Mills' necessary and sufficient conditions, randomization and the desire to find truth and cause. Note that the assumption of this method especially in the idea

is that we can control enough extraneous variables in the environment to truly isolate independent and dependent variables. Is this the pinnacle of science that will teach us about the human condition? Why or why not? We can begin to muse about whether the study of religion would allow us the kind of control we need to do true experimental designs. To fully answer these questions we would have to first narrow our questions so that we could operationally define our terms and set forth the kinds of controls required. What might some of these interesting questions be?

Reading:

Rosnow & Rosenthal, Chapter 7

January 22: The intuitive soul vs the science of the soul

Let's start with what your grandmother already knows – there is a soul. You come to this class with this as a truism. But can we just for a moment dispel your confidence in this proposition? Today we read Musolino's second chapter and ask why we are so sure about our belief and whether we might ever question that. What doth the science tell us and how compelling is mere intuition and observation.

Reading:

Musolino, Julien (2015). *The soul fallacy: What science shows we gain from letting go of our soul beliefs*. New York: Prometheus Books. **Chapter 2, pp. 39-69.**

Week 3

January 27: Reliability and Validity

Cornerstones of all research, reliability and validity ensure that what you see is what you get. They are key research concepts that allow us to have confidence in our findings. But how do we reach adequate levels of reliability and validity – especially when so much can go so wrong even in the contexts of true experimental designs. In this class we examine reliability issues that we face when we do experimental lab designs and contrast that with some of the issues we face when we look into questions of morality. What are the advantages or disadvantages of being in a lab or being in the world. How might we design our projects so that they are sensitive to issues of reliability or validity? Why does it matter?

Reading:

Rosnow & Rosenthal, Chapter 6

January 29: Just what is the soul, religion or spirituality?

To study these constructs we have to be quite clear about the operational definition and the measurement of the constructs. Today we read a bit about problems with the definition of the soul from a scientific point of view. We also look at how some researchers are struggling to define and measure their constructs in a clear and reliable way. You can judge whether they are making any progress and whether you would trust the measures and valid indicators for the study of these somewhat muddy constructs.

Readings:

Musolino, Julien (2015). *The soul fallacy: What science shows we gain from letting go of our soul beliefs*. New York: Prometheus Books. **Chapter 3, pp. 69-97.**

Hill, P.C., & Pargament, K.I. (2003). Advances in the conceptualization and measurement of religion and spirituality: Implications for physical and mental health research. *American Psychologist*, 58(1), 64-74.

Week 4

February 3: Statistics: A partner in design

Methodology and statistics are often divorced in the ways we present them to students. Yet, they are intricately tied to one another such that a choice in design is also a choice in statistical analysis. This class reveals the partnership between the two and demonstrates how one can plan statistics while also planning the methodological component of our experiments. How do our statistics flow from the designs we choose?

*****Your first journal synopsis is due today.** Please read the article and make sure you bring your assignment to class. Your synopsis should be written about the Shariff & Norenzayan (2007) article below.

Readings:

Rosnow & Rosenthal, Chapters 13 & 14

Shariff, A., & Norenzayan, A. (2007). God is watching you: Priming God concepts increases prosocial behavior in an anonymous economic game. *Psychological Science*, 18(9), 803-809.

February 5: Statistical Models and religion

Don't be afraid or intimidated by today's readings. You already know that religion is a complex, multifaceted construct. Thus, it will require complex and multifaceted measures and statistical analyses – some that you have probably never heard of before. Today we introduce something called a levels-of-evidence approach in which Powell et al., (2003) attempt to evaluate the extant data to assess 9 hypotheses. They look at up to 9 studies to examine those studies that meet the highest level of empirical data and find that religiosity predicts a healthier life style which in turn predicts better health outcomes. They caution that their data do not lend us to believe that ill people will become better due to religious belief, but rather that religion is a kind of inoculation against unhealthy living. We also introduce the concept of a meta-analysis which is a technique that allows you to review a body of work that contains multiple papers and to see if you can identify trends across those papers. Here McCleary et al., look for relationships between religious conviction and psychological traits like authoritarianism across 28 studies.

Readings:

Powell, L.H., Shahabi, L., & Thoresen, C.E. (2003). Religion and Spirituality: Linkages to physical health. *American Psychologist*, 58(1), 36-52.

McCleary, D.F., Quillivan, C.C., Foster, L.N., & Williams, R.L. (2011). Meta-analysis of correlational relationships between perspectives of truth in religion and major psychological constructs. *Psychology of Religion and Spirituality*, 3(3), 163-180.

Week 5

February 10: Quasi-experimental designs

The first step in the transition to the real world involved abandoning the strict requirements for true random designs. One cannot randomly assign some people to poverty and some to drug use, or to artistic talent and artistic opportunities. Thus, to study the effects of real world contexts of behavior, we needed a new model that preserved scientific integrity. The quasi-experimental design offered the solution. You will see why this is a natural design for the study of religion. We cannot randomly assign folks to be Jewish, Muslim or Christian nor can we randomly assign them to be more or less religious.

Reading:

Rosnow & Rosenthal, Chapter 8

February 12: Brain research and spirituality: Are there brainwaves for prayer?

With the advancement of neuroscience techniques, we are also learning that there might be a neural signature for certain aspects of spirituality. Professor Newberg of Thomas Jefferson University practices what he calls neurotheology. Check out his website (<http://www.andrewnewberg.com>). He holds that belief in god actually changes your brain. Today, we contrast some of the findings presented by Musolino with this alternative perspective.

Readings:

Musolino, Julien (2015). *The soul fallacy: What science shows we gain from letting go of our soul beliefs*. New York: Prometheus Books. **Chapters 4 and 5, pp. 97-151.**

Newberg, A. (2011) This is your brain on religion. USA Today (<http://www.andrewnewberg.com>)

Newberg, A. & Lee, B. (2005). The neuroscientific study of religious and spiritual phenomenon: Or why god does not use biostatistics. *Zygon*, 40, 469-488.

Newberg, A., Wintering, N., Waldman, M., Amen, D., Khalsa, D., Alavi, A. (2010). Cerebral blood flow differences between long-term meditators and non-meditators. *Consciousness & Cognition*, 19, 899-905.

Week 6

February 17: Qualitative Research

Case Studies, Diaries, Ethnographies and Protocol Analyses are among the ways we first explore the research terrain. These methods allow us to probe an area and to derive the interesting questions based on the contexts and running commentary of our participants. While these methods have great utility for getting our research started, they have often been criticized as less scientific than the more quantitative methods of research. In this class, we do a survey of these methods along with their strengths and weaknesses.

Your midterm examination will be available today after class. This is a take home, open-book exam. Please complete the exam and upload it onto blackboard by February 26, at 5 pm.

Readings:

Rosnow & Rosenthal: Chapter 4 & 5

Rymer, R. (1993). *Genie: An abused child's flight from silence*. New York: Harper Collins. 3-26; 89-130.

February 19: Case Studies in religion

Let's dig deeper into the reciprocal relation between research *questions* and research *designs*. Sometimes you get your best ideas by looking deeply at a phenomenon in a restricted group of people. Case studies are deemed qualitative research and they are mostly out of favor in mainstream psychology. Yet, they have been critical in highlighting interesting phenomena within the field. Nowhere was this more evident than in the study of neuroscience where cases like Phineas Gage unlocked mysteries about the neuropsychology of social behavior and where patients like HM revealed the organization of human memory in ways that would have been hidden without him. Today, we ask how case studies in the study of religion and spirituality can enlighten the questions we ask and the way in which we might study fundamental issues in religion and spirituality.

Readings:

Musulino, Julien (2015). *The soul fallacy: What science shows we gain from letting go of our soul beliefs*. New York: Prometheus Books. **Chapter 6, 151-177.**

Hyde, B. (2010). Godly play nourishing children's spirituality: A case study. *Religious Education, 105*(5), 504-518.

Hasselle-Newcombe, S. (2005). Spirituality and 'mystical religion' in contemporary society: A case study of British practitioners of the Iyengar method of yoga. *Journal of Contemporary Religion, 20*(3), 305-322.

Week 7

February 24: Observational Methods: An overview

Can we really observe behavior without bias? Without being obtrusive? In this class we learn how seemingly qualitative research takes on a quantitative flavor. How do we get "clean" observations that are untainted, reliable and valid?

Readings:

Rosnow and Rosenthal, Chapter 4

****Journal synopsis 2 is due today.**

Canfield, C.F., & Ganea, P.A. (2014). 'You could call it magic': What parents and siblings tell preschoolers about unobservable entities. *Journal of Cognition and Development, 15*(2), 269-286.

February 26: But we see and feel our soul, don't we?

In this class we ask how our observations might lead us to believe in a soul. As Paul Bloom and Musolino argue, humans might be natural born dualists – believing in a mind and a body as separate because we are built to distinguish the movements of object and people and to learn that people – not objects have intent. Might those beginning points lead us to hold that the mechanism behind these differences is that bodies are machines and people have souls? Hmm.

Our observations might reinforce these views or fundamentally deceive us. We will also take a look at two papers that speak to observational data and how scientists have used this data to address the question of mechanism. The ghost of observational data comes in how we choose to code or think about what we find. Remember that observations are always tainted by (or informed by) the categories we choose for them. In what ways do observations and does observational data move our scientific study forward and in what ways can it impede our study of psychology and religion. Today we wrestle with that question.

Readings:

Musolino, Julien (2015). *The soul fallacy: What science shows we gain from letting go of our soul beliefs*. New York: Prometheus Books. **Chapter 7, 177-201.**

Kusner, K.G., Mahoney, A., Pargament, K.I., & DeMaris, A. (2014). Sanctification of marriage and spiritual intimacy predicting observed marital interactions across the transition to parenthood. *Journal of Family Psychology, 28*(5), 604-614.

Tuval-Mashiach, R., & Dekel, R. (2014). Religious meaning-making at the community level: The forced relocation from the Gaza Strip. *Psychology of Religion and Spirituality, 6*(1), 64-71.

Week 8

Spring break (write us from someplace warm)

March 4: no class

March 6: no class

Week 9

March 10: Self report Methods – Interviews

A powerful way of getting data from people is to ask them directly. But how do we ensure that we are not biasing their responses? What questions CAN we ask? In this class we explore the techniques designed to help us get the best information from informants in a way that is unbiased and unintrusive. We look at the results from some interview data that is highly structured to semi-structured to unstructured. You will also become a diagnostician.

Readings:

Rosnow & Rosenthal: Chapter 5

Galinsky, E. (1999). *Ask the children*. New York: Quill, pp.xix-17; 59-95.

March 12: Interviewing about beliefs

Today we look at in depth interviews as a way of better understanding spirituality and behavior outcomes. Williamson offers us an inside look at spirit baptism and its impact on drug rehabilitation. The Ecklund articles take us in an entirely different direction by trying to help us understand how scientists reconcile their study of science with their religious beliefs. Do you think these interviews cast some light on the inner tension they might experience in the two world views? How do they resolve the conflict – especially in light of some of the evidence that was presented by Musolino?

Readings:

Williamson, W. P., & Hood, R.W. (2010). Spirit baptism: A phenomenological study of religious experience. *Mental Health, Religion, & Culture, 14*(6), 543-559.

Ecklund, E.H., & Long, E. (2011). Scientists and spirituality. *Sociology of Religion*, 72(3), 253-274.

Ecklund, E.H., & Lee, K.S. (2011). Atheists and agnostics negotiate religion and family. *Journal for the Scientific Study of Religion*, 50(4), 728-743.

Week 10

March 17: Questionnaires and survey research

The structured interview begins to resemble a questionnaire. And questionnaires are used widely to get a lot of information quickly. Not only are they used to get a lot of data from one participant in a study, but also to broadly poll a large number of participants so that we can better take the temperature of a society on a burning issue. How often are arts classes offered in the US? What is the performance of students in different ethnic groups or at different ages? If we do not understand the structure behind the questionnaire, we might fail to ask the right questions in the right way – we might not meet conditions for validity and reliability. Today we examine the structure behind the questionnaire. On Thursday we look at several examples of large-scale questionnaires that give us a picture of arts education and its impact.

Readings:

Rosnow and Rosenthal, Chapter 9

Pasek, J. & Krosnick, J.A. (2010). Optimizing Survey Questionnaire Design in Political Science: Insights From Psychology. *Oxford Handbook of American Political Behavior*, 27-50.

March 19: Surveys about religion, spirituality and various psychological outcomes.

Perhaps the best snapshot of our understanding of religion and spirituality comes from widely distributed questionnaires and surveys that give us the lay of the land with respect to a particular question. What do we know about religious prevalence in our country and elsewhere? Are those who identify more likely to be prosocial? Prejudice? Authoritarian? Caring? Today we look at some of the instruments that have been used to study these questions and we evaluate whether they use the best techniques in survey design.

Worldwide, Highly Religious More Likely to Help Others:

<http://www.gallup.com/poll/1111013/worldwide-highly-religious-more-likely-help-others.aspx>

More Than 9 in 10 Americans Continue to Believe in God:

<http://www.gallup.com/poll/147887/Americans-Continue-Believe-God.aspx>

In U.S., 42% Believe Creationist View of Human Origins:

<http://www.gallup.com/poll/170822/believe-creationist-view-human-origins.aspx>

Ecklund, E.H., & Scheitle, C.P. (2007). Religion among academic scientists: Distinctions, disciplines, and demographics. *Social Problems*, 54(2), 289-307.

Meier, B.P., Fetterman, A.K., Robinson, M.D., & Lappas, C.M. (2014). The myth of the angry atheist. *The Journal of Psychology*, (ahead-of-print).

Altemeuer, B. & Hunsberger, B. (2004) A revised religions fundamentalism scale: The short and sweet of it. *The International Journal for the Psychology of Religion*, 13(1), 47-54.

Pasek, M. Selections from Religious survey measures.

Week 11

March 24: Big Science, Part I

What we have seen throughout the term is that psychology poses complex questions and that these questions can be answered through a number of different methodological choices. In fact, current trends are to use multiple methods and to generate huge data sets to get a fuller picture of the human condition. In developmental psychology, this trend was best articulated by Uri Bronfenbrenner a giant in the field who worked in the area of applied development. His theories sparked a huge study of child care called the NICHD Study of Early Child Care and Youth Development that we will discuss today. One of the offshoots of these newer BIG science initiatives is that they generate the possibility of doing secondary data analysis. This means that instead of gathering your own data for a project with a limited sample size, you can use the collected data of multiple investigators and reanalyze that data to address questions of psychological interest. This kind of science is gaining ground. Recently, there have been calls to create a digital video base for researchers who want to reanalyze context-based behavior in home and schools called Databrary. It is an initiative spearheaded by Dr. Karen Adolph at New York University. And as of last year, Temple University is proud to be among the first universities participating in that initiative. There is also a movement in the field of neuroscience to store images of brains collected from a number of studies and a number of researchers so that new scientists can reanalyze the data to investigate new and enduring questions. Let's take a peek at big science and at secondary data analysis with an eye towards the risks and benefits of this new approach.

Reading:

Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*, 22, 723-742.

March 26: Presentations

Week 12

March 31: Big Science, Part II. Can we rely on secondary data?

In this class we ask about the merits and the potential risks of using secondary data. While secondary analysis is becoming increasingly popular – even in our own honor's class, we need to be aware of the benefits and the weaknesses in these newer approaches to analyzing our data.

Readings:

Johnson, D. (2001). Sharing data: It's time to end psychology's guild approach. *APS Observer*, 14(8), 1-3. <http://www.psychologicalscience.org/observer/1001/data.html>

Johnson, D. (2001). Three objections to data bases answered. *APS Observer*, 14(9), 1-5. <http://www.psychologicalscience.org/observer/1101/database.html>

Johnson, D. (2001). Three ways to use data bases as tools for psychological research. *APS Observer*, 14(10), 1-4. <http://www.psychologicalscience.org/observer/1201/databases.html>

Johnson, D. (2002). The power of psychology's data bases. *APS Observer*, 15(1), 1-2. <http://www.psychologicalscience.org/observer/0102/databases.html>

Ivry, Rich. (Jan. 2013). Big data has left the station. APS Observer. <http://www.psychologicalscience.org/index.php/publications/observer/2013/january-13/big-data-has-left-the-station.html>

April 2: Presentations

Week 13

April 7: Putting it all together

Traditional research has used one method to the exclusion of the other. Lab-based research is used or qualitative methods. Yet, we are in the dawning of a new age where many are beginning to look across disciplinary and methodological boundaries to take a fuller and more complete look at complex behaviors. As we have seen in our study of the digital you we will need to invoke multiple methods to fully understand a complex process and to better understand how the technology and the way it contributes to our understanding of the human condition. I hope these articles in the study of religion will prompt you to ask how the many methods we use to study complex behavior will help us better understand the human condition and how a cornucopia of methods might enable a fuller picture of human behavior. Is our field ready to embrace multifaceted approaches that go beyond the true experimental design. In what ways might adherence to strict experimental designs strangle us and in which ways will our traditional approaches allow us to build a window onto our understanding?

April 9: Presentations

Week 14

April 14: Presentations

***Please make sure that your advisors have a copy of the evaluation forms that must be returned to me by April 21st.**

April 16: TURF

Week 15

April 21: A tantalizing new paper on the rise of prosocial religion

Reading:

Norenzayan, A., Shariff, A.F., Willard, A.K., Slingerland, E., Gervais, W.M., McNamara, R.A., & Henrich, J. (2014). The cultural evolution of prosocial religions. *Behavioral and Brain Sciences* (ahead-of-print).

***Take home final exam will be available today and must be turned in at the poster session on April 28th.**

April 23: Final discussion of Julien Musolino's book with a special guest appearance by Julien Musolino

Class party

Reading:

Musolino, Julien (2015). *The soul fallacy: What science shows we gain from letting go of our soul beliefs*. New York: Prometheus Books. **Chapters 8 and 9, 201-253.**

April 28th: Poster Session in 6th Floor Weiss Hall 11:00-1:00

Join the seniors as we celebrate their posters and have a department wide party!

All 4991 students must report by 10:30 to display their posters.