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# The Who of Social Psychology: The Challenges of Humans Studying Human Behavior

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Social psychology is among the most challenging of scientific pursuits because the object of scientific inquiry changes due to the investigation, and has thoughts about it. The scientist is a human being trying to discover how behavior is shaped by the social context. The “who” of scientists is shaped by their context, so a brief historical account of the field focuses on its origins, the various revolutions, and their possible impact on social psychologists’ identity. The difficult problem lies at the center of this chapter: How have human beings as humans been able to study human thought, emotion, and behavior empirically? As examples in the field will show, human nature influences social psychological scientists. The self-perception of social psychologists depends in part on the perspective of other psychologists, academics, and the public. More broadly, structural bias influences samples, narrows scientific definitions, and defines careers. Next, academic identity drives norms within the discipline—including those of best practice—and allows social psychology to influence a wide variety of other disciplines, including law, mental and physical healthcare, policy and political science, business, media studies, communication science, and education. Finally, social psychologists likely will continue to overcome the challenges of studying human beings while being human. Non-human machines and algorithms may have a central role in collecting and analyzing data, and a more prominent role for social psychological theories that are generalizable across a range of behaviors, social contexts, and people. Throughout, best practices for researchers will address the impact of being human on the research and the discipline.

## PREFACE: EVEN AN EXPERT

A social psychology professor might claim that studying human behavior is among the most difficult of sciences known to humankind; it is a truly hard science. The professor might have made this assertion to pat themselves on the back for being involved in such an intellectual pursuit or to illustrate the scope of the challenge when conducting social psychological research. Such a grand claim might shock students, but cells studied in a lab do not change simply because they are being observed. People do. In a few other sciences, the phenomenon being studied changes because it is

being studied. The change is not permanent, except when experimentation brings harm to the participants, including physical harm by denying the participants access to medicine or therapy that could help them, or psychological harm because of the experience of the experiment, as famously occurred in the case of Milgram (1974) and Zimbardo (1973). Participants change their behavior during observation; human beings know when they are being observed, particularly if they sign a consent form. Any social psychological study must account for this, and social psychologists are the *experts* at devising research methods to overcome this challenge.

To complicate matters further, the phenomenon being studied overlaps with the researcher. That is, human social behavior is the topic of inquiry, a phenomenon that the researcher is constantly engaged in. Moreover, the researcher is an *expert* in naïve or intuitive theories about human behavior. Therefore, researchers are examining humanity through their human lens, not observing directly, unobtrusively, and impartially (see Hastorf & Cantril, 1954). Stated differently, the aspects of that researcher's self that are relevant to the social behavior being studied can bias every aspect of the experimental process, from selection of the research question onward. Here, social psychologists tend to do less well adjusting for the bias, allowing counterintuitive findings, structural social biases, and a historic hierarchical academic culture to influence the field and distort the science. This chapter addresses these concerns.

Therefore, science is done by humans, and the researcher's humanity impacts every aspect of every choice made in the scientific process. The choice of research question, including why that specific question and not another, given all possible gaps in the literature, depends on what individual researchers value as human beings and thus find interesting, biasing this choice. Such idiosyncratic choices propagate throughout the entire scientific process. For instance, researchers may feel an obligation to study issues affecting their group, such as race and racism, rather than other interests they may hold. Such identity-related obligations exist for other identity characteristics, and human beings are complex and replete with identities that vary in their importance (Linville, 1985). Such variance determines the research question. On a more situationist scale, people's life experiences also shape their interests, influencing what they might find interesting for scientific inquiry (Kulberg & Owens, 1960; Chaney & Ownes, 1964).

The choice of research design and the population to which the experiment can be generalized is also influenced by researchers' humanity. Here, disciplinary culture often comes to bear, determining what counts as valid, even though alternate designs and samples are also scientifically valid. Customs, traditions, and norms influence researchers beyond their identities, shaping their research approaches. Experimental decisions, even the fact that they rely on empiricism as an epistemology, valuing quantitative data, results from their humanity, and similar seemingly objective decisions in the research processes are anything but objective.

Data collection and analysis also are influenced by researchers' humanity. The way particular questions are framed can alter participants' interpretation, biasing their responses in a manner consistent with researchers' biases. Analysis strategies are hypothesis-driven, resulting from biases. Statistical analyses can be manipulated to reflect one's beliefs (Huff, 1954).

For example, labels on diagrams allocated to different variables can reflect bias—e.g. considering one condition a “deficit” for instance, because of a researcher-held belief about the value of a variable. Take for instance empathy: A perceiver's failure to engage in empathic processing to another's suffering is typically viewed as a negative outcome given the positive impacts of empathy on helping behavior (Batson, 1987). A researcher who holds the view that empathy is a good thing may be naturally inclined to describe a lack of it as a deficiency. However, empathy is just a psychological

construct without inherent value and interacts with the social context to determine its value or harm in that particular context (Bloom, 2017). People regulate their empathic response presumably because empathy is psychologically taxing on the perceiver (Cameron et al., 2019). Such regulation may lead to positive outcomes, such as for medical professionals who stave off burnout (for review, see Delgado et al., 2023).

Finally, the interpretation of quantitative data is highly subjective. For instance, a researcher can examine the standard error, which indicates the variance of prediction likelihood, instead of the standard deviation, which indicates the variance of observations. Standard error bars are typically smaller, and estimates of effect size are less accurate with standard error bars than standard deviation, even with data analysts and academic experts (Zhang et al., 2023). Additionally, different researchers can analyze the same data set and come to different conclusions due to differences in analytic choices around data pre-processing, data exclusion, thresholding, treatment targets, and rationale (Bastiaansen et al., 2020; Botvinik-Nezer et al., 2020; Breznau et al., 2022; Silberzahn et al., 2018).

Moreover, the façade of empiricism allows researchers to advocate their bias as scientific evidence. Data and other information that appears more scientific is more convincing to others, even scientific experts (McCabe & Castel, 2008), and thinking about people's behavior as being driven by biological rather than social forces affects responsibility and punishment decisions (Capestany & Harris, 2014), even in legal experts (Aspinwall, Brown & Tabery, 2012). Advancing social psychological science requires mitigating bias at every step of the research process and academic industry.

The chapter that follows attempts to describe the vast challenge facing researchers who study human behavior in social and personality psychology (hereafter referred to as social psychology), and to address the central challenge of how to study human behavior while being human. A brief history of the field considers how this history shaped the identity and practices of social psychologists today. Then, exploring who social psychologists are, can enlighten the consequences of such demographic and ideological characteristics on the research the field produces. Next, academia is a human institution, role that can create a context where biases run rampant. Finally, the future of the human in social psychology will overlap with other fields, such as artificial intelligence (AI). Throughout, this chapter suggests best practices and strategies for overcoming the problem of being human while studying humans. By the end, the reader should feel empowered to explore human behavior aware of the impact their humanity will have on their science, but armed with strategies to mitigate these impacts.

## **HISTORICAL EVENTS SHAPE SOCIAL PSYCHOLOGISTS**

Human beings are hyper-social creatures (Tomasello, 2019). This enhanced social nature propelled human evolution (Humphrey, 1976), allowing great cooperative feats including culture, institutions, nations, and families (Raihani, 2021). All human beings, including social psychologists, are interdependent with other social targets. As a result, social psychologists need to be keenly aware of the impact of their humanity, embedded in the social world, on their science. Historically, social psychology has been shaped by the experiences of its researchers and global events that affect all human beings. It has also paid attention to experimentation, and the impact of the researcher on the collection of data (Aronson, Wilson, & Brewer, 1998).

# Impact Of Real-World Events On Social Psychologists

Social psychology is driven by global events. Crises such as the COVID-19 pandemic, the Black Lives Matter Movement (BLM), climate change, and political polarization inspired waves of social psychologists to focus their research on related topics. Human technological advancements, such as the internet and brain imaging technologies, such as functional magnetic resonance imaging (fMRI), and more recently AI, have changed how research is conducted and the research questions examined. Historical events have also impacted the field, beginning with World War II.

## ***World War II***

Despite its early associations with mental health and philosophy (see below), social psychology as an academic discipline took shape post-World War II. During the war, communication was a pressing need, not only to decode Nazi transmissions, but to understand how people were influenced via mass communications—media such as pamphlets, posters, film, and radio. Therefore, social psychological research turned to propaganda and influence, and communication science was born.

Attempts to study these questions were led by Carl Hovland at Yale University under the direction of the Research Branch of the US Army's Information and Education Division. Hovland's collaborators included giants of social psychology such as Irving Janis—later of groupthink fame—and Harold Kelley—later behind the covariation model of attribution. Perhaps the most innovative approach to come out of this lab was the use of experimental methodology to draw causal inferences during field experiments, rather than simply relying on correlational approaches dominant in social science at the time (Lumsdaine, 1984). Though the infamous sleeper effect (Hovland, Lumsdaine & Sheffield, 1949) is commonly cited as the main contribution of this era, perhaps the most lasting contribution of this lab was bringing into social psychology topics such as persuasion, influence, attitudes, and propaganda—topics that continue to fill the pages of social psychology publications today.

The war continued to have an impact beyond the Allies' response to the Nazis. It required Jewish researchers in Poland, Germany, and other parts of Nazi-occupied Europe to flee for their survival. Many fled to the United States, where, along with the United Kingdom, the Allies were organizing and running the war effort. Gordon Allport published the landmark *Nature of Prejudice* shortly thereafter (Allport, 1954). Jewish social psychologists such as Stanley Milgram turned their attention to relevant topics, evidenced by his famous obedience experiments (Milgram, 1963) taking place just after the start of the trial of Adolf Eichmann for war crimes and crimes against humanity. Therefore, because of the war, social psychologists began studying issues related to the conflict, including obedience, conformity, prejudice, and punishment.

## ***Twenty-First-Century Crises: Pandemic And Racial Unrest***

Despite its availability for the past two decades, online research drastically increased because of movement restrictions implemented by most governments during the COVID-19 pandemic. The pandemic increased the use of the Internet as a data collection method, with online workers taking over from college students as the main convenience sample (Gentili & Cristea, 2020). Despite early cautions and recommendations for internet research (see Nosek, Banaji & Greenwald, 2002; Skitka

& Sargis, 2005), internet samples produce similar data to lab-based samples and provide a more demographically diverse set of participants (Gosling, Vazire, Srivastava, & John, 2004). Moreover, data are often collected faster and more efficiently; larger samples enable better-powered experiments, so the increased online samples have some benefits for the field (for a different perspective, see Wilson et al., 2023).

Widespread concerns with racial injustice due to highly visible examples of police violence had a profound impact on the field, not only because these concerns inspired more research on racial bias and researchers to study racial bias, but because they highlighted systemic injustices that affect the quality of the science (see Harris, 2022). Moreover, BLM justified decades of research on shooter bias (Payne & Correll, 2020) and other discriminatory policing behavior; research that informs policy on police violence (Silver, Goff & Iceland, 2022). Of course, the lasting impact of these more recent events on social psychologists has yet to be fully realized. Moreover, the public concerns may be temporary (Richeson et al., 2023).

## Academic Influences

Social and personality psychology emerged as an independent field of study in the mid-1960s, but influential theory existed in the field before the dawn of the *Journal of Personality and Social Psychology* (JPSP). Such theory was couched with philosophical intellectual traditions, with clinical psychology co-occurring as a sibling discipline. Both traditions continue to influence social psychology.

## Clinical Psychology

Early social psychology focussed on abnormal social behavior. The *Journal of Abnormal and Social Psychology* (JASP), published in 1928-1964 by the American Psychological Association (APA), was a new incarnation of the *Journal of Abnormal Psychology*. The journal had adopted the new name three years prior in 1921 for four years, before dropping it in 1925, and re-adopting it three years later.

Analysis of JASP's content from 1925 through the early 1940s before World War II—as noted, an event that fundamentally shaped the field of social psychology—suggests this marriage of clinical and social questions could be divided into five camps, with social measurement and experimental social psychology comprising two camps relevant to modern social psychology, and psychometrics, operationalizing psychoanalysis, and introversion studies the remain three camps (Davidson, 2018). Moreover, there was a methodological division in the field; some research endorsed rigorous experimental and psychological testing approaches, and some endorsed more qualitative approaches (Davidson, 2018). This experimental start to social psychology, along with the measurement focus that would become personality psychology, is still at the core of social and personality psychology, cementing them in the scientific method of these modern fields.

Social and personality psychology and abnormal psychology eventually went their separate ways in the mid-1960s, and JPSP, first published the year after JASP was last published, continues to serve as the flagship journal for the field. JASP eventually became the *Journal of Psychopathology and Clinical Science*. Many other social psychology, general psychology, and science journals have published social psychological research since, but these early years of social psychology provide

insight into who social psychologists were as a discipline historically, which undoubtedly shaped the field's current incarnation.

## ***Philosophy***

On the topic of intuition, another historical observation about social psychology surrounds the influence of philosophy on the discipline. Certainly, philosophy has influenced all academic disciplines as the bedrock of intellectual thought, yet the influence on each field is different. Social psychology can be considered experimental philosophy, a field that recently re-emerged as an academic sub-field within philosophy at the turn of the millennium. As such, early social psychologists such as Fritz Heider were philosophers who made an empirical turn—they relied on data and the scientific method, as well as logic and intuition.

The more recent experimental philosophy discipline follows a philosophical tradition of using intuition to know something about the world (epistemology) or to make progress on moral questions. However, the discipline does not rely on intuitions but marries this tradition with empirical evidence either to demonstrate that intuitions are flawed, to determine which intuitions are trustworthy, or to explore questions about thoughts and feelings. This latter approach is indistinguishable from social psychology, and the other approaches echo social psychological research as well. This highlights the philosophical tradition from which social psychology emanates and to which it still intimately relates. A wise social psychologist, Richard Nisbett, once said you should regularly take a philosopher to lunch.

But how has philosophy affected social psychologists? The philosophical tradition of reifying intuition as a tool to gain knowledge depends on intuition being trustworthy and reliable. Intuitions are folk psychology—the understanding every human being has about the world—and Heider (1958) observed that people as folk psychologists are naïve scientists—they generate and test theories to explain and predict human behavior. Therefore, social psychology belonged to all human beings, not just philosophers, and the study of social cognition was born.

Social cognition dominates social psychological research (though not in its current form until the 1970s, see below and Fiske & Taylor, 2021), and owes that position to its philosophical origins. The reincarnated experimental philosophy discipline investigates the accuracy of human intuitions, what informs intuitions, and when intuitions are engaged (versus some other epistemological tool); all this is necessary if one relies on intuitions to generate knowledge. Given that human beings rely on intuition, the study of social psychology requires the evaluation of intuitions.

## **Academic Revolutions**

Several intellectual revolutions of varying breadths have swept through the academy, affecting either a few disciplines or most of them. As an academic discipline, social psychology has been impacted by four such revolutions to this date. Each revolution has had an impact on the identity of social psychologists as researchers, in addition to shaping the field.

## ***Behaviorism***

The first revolution took place in the 1950s and affected all psychology sub-fields. Behaviorism, led by B. F. Skinner in psychology who was influenced by John B. Watson in philosophy, questioned dualism—the separation of the mind and body (Descartes, 1637)—an idea at the heart of both psychology and philosophy of mind or philosophical psychology as the philosophy sub-field is sometimes called. Instead, behaviorism relied on the private language argument. Behaviorists therefore rejected the idea of mental states.

We continue to hang onto this behaviorist tradition to this day. Most social psychology studies measure some form of behavior, be it self-report, reaction time, or the amount of money or time donated to a cause. However, some researchers and many behaviorists themselves do not consider self-report as behavior and argue that behaviorism has disappeared from the field (Baumeister, Vohs, & Funder, 2007). The continued use of self-report measures separated social psychologists from behaviorists. Behaviorism did not address concerns surrounding our intuitions. Social psychologists largely continued in the Gestalt tradition during this revolution.

Beyond behaviorism, exploring behavior in social psychology experiments allows us to control some of the biases we bring to the experiment as human beings. However, the intuition that we derive from behavior is still subject to bias, so researchers must ensure that the paradigm that elicits behavior is such that the behavior is clearly defined, can be easily inferred and generalized across human beings, and alternate explanations for the behavior are reduced or eliminated.

## **Cognitivism**

Behaviorism led to many advances in social psychology and psychology more generally, particularly around social learning. However, behaviorism met a problem it could not solve using its advocated approach of behavioral observation: language acquisition. Young children have the remarkable ability to acquire language flawlessly, regardless of their inherited biology or culture, while adults struggle with language acquisition; simply observing behavior was not sufficient to understand why this phenomenon occurred (Campbell & Wales, 1970; Chomsky, 1968). As a result, changes in experimental methods and the types of behavior measured heralded the second revolution: the cognitive revolution.

The cognitive revolution promised a glimpse inside the proverbial black box of cognition. If cognitions were private, might we be able to know what they were by measuring subtle behavioral performance? Instead of just surrendering because the mind was unobservable as behaviorists did, cognitive psychologists created mental models of how the mind functioned and tested predictions of these models with behavior. This led to the formation of principles that governed the inferences derived from this behavior, providing a valuable glimpse (Fiske & Taylor, 2021). As a result, social cognition swept through social psychology.

This second revolution also changed the way social psychologists viewed themselves. The lines between cognitive and social psychology blurred as cognitive methods were applied to social questions regarding attention, memory, decision-making, perception, and emotion. Reaction time and performance measures featured prominently, and the study of social cognition grew from initial person memory effects (Hastie, Ostrom, Ebbesen, Wyer, Hamilton, & Carlston, 1980) to its prominent role in the discipline, contributing to the study of attitudes, stereotyping and prejudice, person perception, trait inferences, impression formation, decision-making, and so much more. Moreover, dual-process models began to dominate, such as System 1-System 2 decision-making

models (e.g., Sloman, 1996), categorical-individuated impression formation models (e.g., Fiske & Neuberg, 1990), and implicit-explicit bias models (e.g., Devine, 1989).

Though models have advanced beyond dual processes (see the computational revolution below), the approach of creating a model for how the mind works and testing it with very clearly defined experimental paradigms remains in modern social psychological approaches. The cognitive revolution, along with the two that followed, changed the methodological and theoretical approaches of the field, and facilitated insight into a myriad of important topics, advancing understanding and influencing interventions.

## Neuroscience

The third revolution occurred not because of a failure of the previous revolution, but as a response to one of its shortcomings. Technological advancements in magnet physics gave psychologists the unobtrusive ability to peer inside the head to the brain, the physical manifestation of the mind. Brain imaging technology triggered a neuroscience revolution that swept not just through psychology, but also many other academic disciplines concerned with human behavior, including economics (Glimcher & Rustichini, 2004; Loewenstein, Rick, & Cohen, (2008), political science (Schreiber, 2017), and law (Nadelhoffer & Sinnott-Armstrong, 2012; Shen 2012). Armed with these novel neuroimaging tools, social psychologists were able to expand on a physiological tradition that began during the cognitive revolution (see Cacioppo, Berntson, Lorig, Norris, Rickett, & Nusbaum, 2003). Social neuroscience thus emerged as a sub-field within social psychology.

Examining brain and behavior requires that researchers focus on one of two types of questions. The first asks what social behavior can tell us about brain function and organization. Given that human beings evolved in a social context, studying social behavior should shed light on brain function. This approach aligns with the social intelligence hypothesis (Humphrey, 1976), which states that human beings evolved intelligence because of the complex social problems humans must solve, given that we are a hyper-social species. Social psychological paradigms therefore provide valuable insight to cognitive neuroscientists who wish to better understand the brain by exploring social behavior.

The second type of question asks what can the brain tell us about social behavior. Given that all behavior relies on brain signals to engage muscles and subsequent movement, studying the brain provides insights into social psychological questions. These types of questions center the social behavior, not the brain, viewed here as another dependent variable along with behavior, and any other type of physiological measure. These questions also take advantage of a benefit of brain imaging technology; by glimpsing into the black box of cognition, they allow us to dissociate different psychological mechanisms that may drive the same behavior, or observe similar brain activation patterns for very different kinds of behavior. However, such insights rely on a comprehensive understanding of brain function, which has sufficiently advanced in the more than two decades of social neuroscience research that began around the turn of the millennium. There are now identifiable brain networks that have been reliably associated with social and other psychological processes (see Decety, 2024; Koban et al., 2021).

One challenge for the latter approach to social neuroscience argues that observing brain activation patterns and then inferring something about a social process is a *reverse inference* (Poldrack, 2006)—the scientist infers the presence of the social processes only because of the activation patterns. For instance, the anterior insula is associated with disgust responses and interoception. It is incorrect to



assume disgust upon observation of anterior insula activity since interoception might have led to the anterior insula response. This challenge is addressed by carefully defining the experimental paradigm and subsequent inferences from behavior. In addition, researchers can pre-define activation patterns with another task independent from the one used to test the hypothesis, but likely to drive the hypothesized mechanisms. This independent exploration of brain regions via region-of-interest analyses can also be achieved by relying on large databases of brain activation studies, which allow researchers to triangulate specific activation patterns common across hundreds or thousands of studies where researchers explore a social phenomenon or process. In addition, researchers are not limited just to brain activation patterns or electrical pulses; brain imaging methods allow the exploration of connectivity between brain regions, allowing more nuanced tests of theories.

Finally, and most importantly, the reverse-inference challenge can be leveled at all psychological paradigms because of the private-language problem—a perceiver cannot truly know the content of a target's thoughts and feelings (Wittgenstein, 1953). This suggests that even a glimpse into the black box of cognition does not allow us to escape this fundamental challenge of studying the mind.

## ***Computational Approaches***

At the time of publication, the field is squarely in the computational revolution, which has swept academia more broadly than even the neuroscience revolution from the early noughties, affecting other social sciences such as political science (Lavelle-Hill, Mazumder, Goulding, Smith, & Landman, 2021). The dawn of the big dataset available online has transformed many fields, including social psychology.

The computational revolution has married many aspects of social psychology's history. Computational models, the bedrock of this approach, have always been a part of the field since its inception. Kurt Lewin (1935)—the father of social psychology—proposed a social forces theory:

$$B = f(P, E);$$

where  $B$  represents a person's behavior, and  $P$  and  $E$  represent factors native to the person and environment respectively. Computational models, expressed as algebraic equations, appear throughout the history of social psychology, from such researchers as Harold Kelley (1972), Norman Anderson (1974), and Susan Fiske (1980), to name a few. Additionally, computational approaches rely on theorizing about mental phenomena, a common approach in social psychology since the cognitive revolution. Such theorizing informs the model, allowing it to function optimally. Finally, computational approaches themselves borrow heavily from neuroscience, including neural networks, machine learning, and Bayesian approaches commonly used to address neuroscience data (see Haxby, Gobbini, Furey, Ishai, Schouten, & Pietrini, 2001, for a pattern classifier approach to face processing, a precursor to modern machine learning algorithms). Deep neural networks are AI—algorithms applying pattern classification approaches to large amounts of data.

Big Data has also come with the computational revolution (see broader discussion below). Instead of relying on collecting data themselves, social psychologists now regularly tap large datasets of real-world behavior to address their research questions (Pennebaker & Chung, 2013.). This not only increases the ecological validity of the work but also allows the field to overlap with the sub-field of social psychology within sociology. Sociological methods such as social network analyses, which have always had an influence on social psychology since the inception of the field, have regained

prominence due to the availability of large data sets (Mason, Conrey & Smith, 2007). New analytical approaches are constantly being developed to address such rich resources, and the future of social psychology is indeed brighter because of it. Social psychologists themselves can also now collect large datasets with the advent of online data collection. Instead of relying on a handful of participants locally that takes weeks to collect, researchers can now recruit thousands of participants globally in mere minutes.

Finally, computational approaches are improving our data analyses and reporting. Coupled with the Open Science Movement (OSM; discussed in detail below), computational approaches require that all social psychologists can code, write scripts, and program using skills and software that decades ago were reserved for computer scientists. As such, data visualization and reporting have improved drastically, and statistical analyses are now more exactly reproducible because analysis scripts are available, harmonizing the data analysis pipeline, and improving the quality of our science.

## ***Revolutionary Impact***

Behaviorism provided social psychology with an empirical methodology, cementing its standing as a science. This was an important move for the field given the tension between qualitative and quantitative approaches that existed when it shared a journal with mental health. Behaviorism resolved that tension and allowed social psychologists to view themselves more scientifically. Indeed, B.F. Skinner often wore a white lab coat, and that stereotype of the scientist appealed to social psychologists who often questioned the validity of their scientific pursuit. As a comparison, economists resolved the tension in their approach to human behavior by relying on mathematics and models (Breslau & Yonay, 1999). Social psychologists relied on experimentation and empiricism. To this day, as witnessed by the leading role the field plays in the OSM, empiricism remains a striking feature of the disposition of social psychologists.

The cognitive revolution provided theory, arming social psychologists with models that could help better explain social processes. This probably made social psychologists more divided as a community. “Mini-theories” became a popular feature during the cognitive revolution (Aronson, 1992), and one needed their theory to explain their phenomenon, or else publication in top-tier journals could be even harder to secure. As such, social psychologists devised multiple jargon for the same psychological concept, sometimes intending to improve a misnomer; e.g. the fundamental attribution error and the correspondence bias, the latter being a more accurate description of the phenomenon (Gilbert & Malone, 1995; Jones & Harris, 1967). A lack of agreement on jargon can lead to the creation of silos and makes it harder for people outside the discipline to grasp the contribution of the science.

There are several related issues to consider regarding the use of jargon and theory. One is whether social psychologists re-invent the same theories, a claim many social psychologists would contest. A second issue, which is the more usual occasion for calling something a mini-theory is the level of analysis. After grand theories (e.g., consistency theory) were too broad in the 50s and 60s, social cognition researchers got more precise and limited in scope. A third issue is whether the field uses obfuscating jargon. This latter issue is the main concern raised here; competing jargon makes researchers defensive about their mini-theory and strives to dissociate it from other similar theories. Such splitting of hairs may be a purely intellectual exercise where the new theory has to explain why it is better than the previous ones, for example by being more precise.

The neuroscience revolution provided technology and made social psychologists up their game. Suddenly, the ability to show a social process along with brain data made the process more valid, more real, and more attention-getting; it gained the researcher increased status. This results from a well-documented heuristic whereby people increase the value of evidence if it appears more scientific (McCabe & Castel, 2008; Weisberg, Keil, Goodstein, Rawson, & Gray, 2008) and find more fluent evidence more convincing (Alter & Oppenheimer, 2009). Because social psychologists are people and brain images are as hard-scientific as possible in psychology, the appeal of neuroscience proved irresistible for a lot of researchers. Suddenly every social process was being ported to the scanner without consideration for whether neuroscience would add anything to our understanding of the phenomenon, despite warnings to the contrary (Cacioppo et al., 2003). This backfired to create less credible science and opened social neuroscientists up to criticism true of all sciences (Fiedler, 2011) but targeted specifically to social neuroscientists (Vul, Harris, Winkielman, & Pashler, 2009), presumably because other researchers, themselves naïve scientists, devalue social psychology research because its findings often seem intuitive.

The jury is still out on the current computational revolution, particularly because the OSM has co-occurred, making it difficult to attribute causes to one versus the other. But computational approaches have increased ecological validity and drive open and inclusive science because more researchers from the Global South—regions of the world that are considered under-developed economically and politically, with lower incomes, higher levels of poverty, poor infrastructure, and less social mobility (Thomas-Slayer, 2003)—can now participate in Big Data studies facilitated by the internet. Moreover, social psychologists can now access participants globally and can study actual behavior rather than just controlled laboratory behavior, improving the paradigms' ecological validity. At the core of the computational revolution are correlational approaches: Instead of relying on careful control and manipulation, big data approaches seek relations and patterns to inform prediction. This is quasi-scientific, in not showing causality, yet surprisingly has been warmly received in social psychology. Therefore, it seems to have made the field more accommodating of alternate epistemological approaches, perhaps re-opening the door to qualitative approaches that would serve the field well in generating theory (Syed, 2021).

This brief history of the field (for a more substantial history, see Miller & Laurin, 2025) highlights how different events have shaped the field and impacted the *identity* of social psychologists as researchers and scientists. Next, this chapter marries this understanding of the history of social psychology with the understanding of human beings to explore how social psychologists' standing as humans affects the science they conduct. In so doing, it aims to address how an understanding of who social psychologists are as human beings impacts the field itself.

## SCIENCE IS DONE BY HUMANS

Science holds the promise of providing objective and veridical information about the world. This epistemological approach allows humans to know something if they believe it, it is true, and the evidence is good, but not necessarily indefensible (Appiah, 2003). The scientific method cannot show whether anything is true for certain because null hypothesis significance testing (NHST) can only reveal that something is not untrue (a double negation); it can only assess the probability of failing to find evidence supporting the research (alternative) hypothesis. After all, a *p*-value is the probability that the null hypothesis (of no difference) is true. As such, it is concerned primarily with the quality of the evidence—whether evidence is *good enough*. Researchers therefore rely on empiricism, the claim that our beliefs are justified by careful observation. If one observes a pattern

of behavior beyond a statistical threshold that differs across conditions with adequate operationalization and experimental manipulation of the independent variable(s) and adequate controls, then one can know something about human behavior captured in the experimental effect.

The philosopher John Locke (1690), a contemporary of physicist Isaac Newton, argued that all our ideas come from our experiences and reflection (i.e., logical reasoning). As such, all research questions and hypotheses, research designs, and theories result from the perspective of being human. Therefore, understanding who we are as human beings is relevant to facing the problem of studying human behavior while being human.

However, not all data based on observation are defensible. As such, scientists require criteria for determining what is *good enough* evidence that something is indeed true. In so doing, scientists identify foundational beliefs upon which all other beliefs are based. Thus, the foundational beliefs in social psychology should support other derived beliefs. The power of the situation is the foundational belief in social psychology; it supports other derived beliefs because they all demonstrate that situational power (e.g., manipulation) influences human behavior.

Foundational beliefs rely on standards that scientific evidence must meet to be considered valid. The OSM questioned many such beliefs in social psychology—well-regarded pillars supporting influential theory—because it changed the cultural standards or criteria for a belief to be considered *good enough* (see below on the OSM in more detail). Indeed, concerns surrounding the quality of scientific evidence existed before the OSM (for example, see Rosenthal, 1979). Nonetheless, the OSM highlights a truth about human beings scientifically probing human behavior: the standard for *good enough* is not permanent or objective, but shifting and subjective. And social psychology researchers' humanity influences it.

## The Impact Of The Experimenter On The Experiment

Traditional approaches to mitigating the impact of the experimenter on the experiment advocate for best practices that have yielded fruit in scientific research (see Wilson et al., 2024). Examples of such influences have been documented since the early days of social psychological research (Rankin & Cambell, 1955) and continue to occur in modern research (Thorsen, Mendes, & West, 2020). In the process of avoiding contaminated measurement, in a contrived sense, of what the participant thinks they should do, or what the experimenter thinks the participant should do, these traditional approaches have become scientific norms in social psychology.

### ***Demand Effects***

Demand effects are features introduced to an experiment by participants knowing they are a part of the research study and wanting to do the right thing (Orne, 1962). Participants are motivated to make sense of the experimental situation, which involves coming up with explanations for events in the experiment, as well as attempting to guess the hypothesis under investigation.

Sensemaking by the participant also takes place to avoid negative evaluations from the experimenter. Despite the experimenter usually being a stranger to the participant, like most humans, most of the time, participants are motivated to convey a positive impression to others, even strangers (Tice, Butler, Muraven, & Stillwell, 1995). As such, participants may behave to self-

present as intelligent, warm, or just competent at completing the task. Therefore, the idea the participant has about the research also drives their behavior, not just the experimental manipulation doing so. Participants therefore cooperate to produce the imagined predicted result. This cooperation is concerned with “looking good” or appearing intelligent and competent, rather than simply confirming the experimenter’s hypothesis (Sigall, Aronson, & Van Hoose, 1970). As such, impression management is a priority for research participants, and they are highly responsive to cues that suggest what they should do to appear normal, or to make the study work.

The problem of demand characteristics can be solved by hiding the hypothesis from the participant. This is easily achieved in between-subject experimental designs where participants are not in multiple conditions of the experiment. However, within-subject experimental designs are more problematic. They boast more power to detect an effect because the participant appears in each condition of the design, eliminating between-participant noise across conditions. Therefore, within-subject designs are often preferable, particularly for experiments where behavior is detected amongst a noisy signal (e.g., physiological measures).

However, other ways of preventing the transmission of the hypothesis to the participant are necessary, bearing in mind that the participant engages in sensemaking and will imagine a hypothesis whether one is conveyed or not. This is perhaps one of the primary reasons that social psychological paradigms often rely on theatre, deception, and the use of confederates (Augustine, 2014) in an attempt to both create ecological reality and mislead the participant as to the true nature of the experiment, mitigating demand effects. As social psychologist Stanley Milgram once stated, experiments in social psychology “smack much more of dramaturgy or theatre” (Blass, 1992, p. 287).

## ***Expectation Effects***

Expectation effects are the subtle and unintentional transmission of the hypothesis to the participants in the experiment. As such, expectation effects characterize a facet of demand characteristics. Evidence suggests that such subtle transmissions occur in human-animal interactions (see Rosenthal & Lawson, 1964), highlighting the danger when human beings serve as participants. Expectation effects therefore can also bias results, contributing to failed replications, false positives, and a less reliable scientific record.

Combatting expectation effects requires keeping the experimenter (the person collecting the data) blind to the hypothesis so that they are unlikely to transmit the hypothesis to the participants. This is the aim of double-blind designs, where both the experimenter and participants are blind to the hypothesis. While such designs have become standard cultural practice in drug trials, for instance, they are less used in social psychology. Less effective intervention requires that the experimenter is at least blind to the condition—a much more likely scenario in social psychology labs. Finally, the researcher can use multiple experimenters, with each blind to a specific aspect of the hypothesis or experiment.

Good scientific practice also helps mitigate demand and expectation effects. Randomized assignment to condition, adequate experimental control, and proper operationalization of psychological concepts to behavior all contribute to a sound scientific experiment, ensuring that inferences drawn from the data are not false positive, but reflect an underlying truth about human behavior.

## ***Experimenter Identity Effects***

The impact of the experiment on the participants during data collection has been addressed in the field since at least the 1940s and has been discussed in all past editions of this *Handbook*. Yet impacts of the researcher on the entire experimental procedure historically have not received the same attention. Human beings are susceptible to bias blind spots—an inability to recognize biases in themselves, while recognizing them in other people (Pronin, Lin, & Ross, 2002). So too are social psychologists; they are often unable to notice how their personal biases influence their research and how they evaluate the research of others. These biases result from who social psychologists are as human beings.

## **Who Are Social Psychologists?**

Human beings—not machines, non-human animals, or aliens—research human beings. As such, knowing something about the human beings who conduct the research can help highlight biases and blind spots in the research literature. Social psychologists come primarily from North America and Western Europe. As such, issues relevant to these cultures have dominated the study of the field. However, the discipline attempts to make contributions to the understanding of all humans, even though all humanity is not represented by researchers or participants whose data inform theories in the field. This problem is not unique to social psychology; all academic disciplines suffer from a lack of global representation. Moreover, social psychology is not representative of political ideology (Haidt & Jussim, 2016).

## ***Demographic Composition***

Gender data are available to measure the field's composition, but the discussion is restricted to North America and Western Europe because these are the places where most researchers are located, and data are available in these regions. Of course, the absence of data itself indicates the lack of representation, and further biases this discussion, so perhaps future editions of *The Handbook* can better characterize the field as more representative of humanity. Nevertheless, below is a review of some of the demographic data on social psychologists, given these restrictions. Moreover, this section goes beyond demographics to talk about where social psychologists can be found in the academic and non-academic industries.

Compared to the psychology average of 20%, social psychology as a sub-field places 45% of the people who pursue a doctoral degree in North America in faculty positions where they engage in teaching and research (APA, 2019). 10% of all psychologists in faculty positions are social psychologists. 61% of social psychologists hold tenure at these institutions, on par with other psychology sub-fields.

In the United States (US), psychology as a discipline boasts 53% of women in faculty positions, reflecting an increasing trend over the last three decades (APA, 2019). A similar increase is seen when considering the percentage of women in faculty who are tenured and in leadership positions. 52% of faculty members are between 40-60 years old, and 27% are over age 60, suggesting that older persons comprise the majority of the discipline, a trend that has held for the last three decades. The average age of psychology faculty members has steadily risen over the last three decades, reaching 50.5 in 2015. The percentage of non-White faculty in psychology stood at 22%, an increase of 14

percentage points over 30 years. This increase is also reflected in the number of racialized faculty in leadership and tenure positions. 9% of psychology faculty reported some type of disability.

The picture in Europe is not much different. An analysis of the membership of the European Association of Social Psychology (EASP) shows that women dominate social psychology in Europe, during the early career stage, with twice as many women than men in its post-graduate membership in 2011 (Nyúl, Lantos, Reicher, & Kende, 2021). That number further increased in 2017. However, full membership (usually tenured faculty) showed a 50-50 gender split, with only 59.8% of women retaining their membership during the transition from post-graduate to full membership from 2011 to 2017, compared to 70.7% of men. This echoes the decrease in women faculty as academic rank increases that was also observed in the US.

A similar pattern emerges when considering participation in social psychology conferences, summer schools, grants, and editorial board membership at flagship journals. Researchers found that women are overrepresented in all three categories, but once the data are split by post-graduate and full membership, the familiar pattern of fewer women speaking, participating, and receiving grant funding re-emerges for full membership. A look at the composition of the editorial board of the European Journal of Social Psychology (EJSP) shows the same pattern, with women reaching 50% membership only in 2009-2011. A similar pattern can be found in the other flagship journals in Europe (Nyúl et al., 2021).

Researchers have highlighted systemic, interpersonal, and intrapersonal mechanisms that might account for the remaining disparities revealed in the statistics above: lifestyle roles and work-family conflict, gender biases, holding positions of power, intersectionality, harassment and incivility, agency, self-esteem, self-promotion, and a lack of belonging (Gruber et al., 2021). These, along with differences in career advancement, financial compensation, and service assignment and practices combine to not only account for the disparities discussed but also affect the future of women in social psychology (Gruber et al., 2021).

Of course, these gender data highlight a glaring omission of non-binary social psychologists from the count. Such omissions for LGBTQ+ people from basic census data in the field are not limited to social psychology, but widespread throughout STEM disciplines. They highlight that even attempts to record the composition of the field suffer from bias, skewing the available data and making certain people invisible within the field. Recent attempts to highlight such invisibility at places like the National Science Foundation (NSF) in the US (see Freeman 2018; 2020; 2021; 2022) try to persuade such organizations crucial for academic structure to record gender identities so such data can be available.

In Europe, the historical context differs from North America, so race is not the main demographic variable (other than gender) that determines access to a social psychology faculty position. The Cold War meant that many researchers in Eastern Europe were excluded from mainstream (Western) social psychology. As such, analyses of EASP also focus on the participation of Eastern European researchers in the field. 71.6% of members come from just three European countries: the United Kingdom (UK), Germany, and the Netherlands. Only 11.1% of EASP members work in Eastern Europe, suggesting that historical biases and structural inequality across Europe continue to influence the composition of the field, and inevitably, the research that is produced. Further, 90% of award recipients from EASP were from Western Europe between 1984-2002, with only a slight improvement between 2005-2020 with that number falling to 81.8% (Nyúl et al., 2021).

What do these data tell us about who social psychologists are demographically? They work in the US, Canada, the UK, Germany, the Netherlands, and Australia. They are mainly male at the most senior positions, though women dominate the field among early career researchers. They are mostly of European descent. We have less information about other demographic variables such as sexual orientation and gender identity, highlighting not just gaps in data, but biases that failed to consider these variables as relevant for discussions about the field until now. Finally, people's identities predict (on average) different research interests. Since scientists study what interests them, increased numbers of women in the field may have encouraged different perspectives on psychological topics such as leadership, changing its focus from power to mentoring.

## ***Ideological Composition***

At the Society for Personality and Social Psychology Annual Meeting in San Antonio, Texas, US, in February 2011, a throng of eager social psychologists packed a ballroom in the Grand Hyatt to hear Jonathan Haidt give a Presidential Symposium on the Future of Post-Partisan Social Psychology. The content of the talk caused quite a stir among attendees because Haidt described social psychology as dominated by liberal ideologies and insisted that this dominance by one political ideology was harming the field (see Konnikova, 2014). Certainly, social psychology addresses research questions central to social issues and social justice. Yet, Haidt claimed, this focus on social issues had blinded the field from considering other research questions less palatable to liberal values.

Since Haidt's provocative lecture, social psychology has largely accepted that it falls squarely in the domain of liberal thought and values. Haidt was not the first to make this argument; a similar argument was made by Phillip Tetlock (1994) and sociologist Richard Redding (2001) over the preceding two decades. Haidt's point was also echoed by Lee Jussim who also argued that a lack of political diversity had biased the field (Haidt & Jussim, 2016; Honeycutt & Jussim, 2020; Jussim, Crawford, Anglin, & Stevens, 2015; Jussim, Crawford, Stevens, & Anglin, 2016).

Indeed, most academic disciplines tend to lean liberal because education is correlated with liberal attitudes, beliefs, and values (for one account, see Surridge, 2016), and conservatives may be actively excluded by the liberals who dominate the field.

However, this does not always seem to have been the case. While a study a decade ago found that 85% of SPSP members considered themselves liberals compared to 6% who considered themselves conservatives (Inbar & Lammers, 2012), data from before 1960 suggest that psychology experienced a more even split of political attitudes (McClintock, Spaulding & Turner, 1965). While reasons for this transition to a more liberal field are hard to identify but might include a polarisation of liberal and conservative viewpoints, it does suggest that the field is in danger of bias driven by a single ideology dominating the research.

Duarte, Crawford, Stern, Haidt, Jussim, & Tetlock (2015) identified three risk factors of ideological homogeneity within social psychology. The first posits that liberal values and assumptions can become embedded in theory and methodology. For instance, the phrasing of survey questions may represent such bias if for instance the conservative position is framed negatively (e.g. climate change denier). The second risk factor surrounds the topics that researchers investigate; they may focus on topics that validate a liberal narrative at the expense of those who contest it. Finally, they warn that such science could mischaracterize conservatives, relying on stereotypes about them rather than actual information about their traits and attitudes. These risk factors open up the



research to confirmation biases consistent with researchers' beliefs and silence a dissenting minority necessary for scientific debate and progress.

Information about ideology beyond liberalism-conservatism is non-existent. For instance, religiosity matters in most countries, yet there is no data on this ideology and the field, perhaps because more academics tend to be non-religious (Larson & Witham, 1998), therefore taking stock of this ideology may not be deemed relevant. Given the heavy Western participation in social psychology, liberalism-conservatism has dominated any such analysis since this ideological dimension is extremely relevant for Western countries. This ideological distinction is less relevant in not Western, Educated, Industrialized, Rich, Democratic (WEIRD) countries, and again, the lack of data demonstrates another WEIRD bias in the field.

## Who Social Psychologists Are Influences What They Do

Social psychologists' humanity also influences the field. The previous section provided an overview of who social psychologists are. These characteristics of the people who compose the field influence what social psychologists do, i.e., how they conduct their research. Social psychologists' humanity shapes, directs, colors, and determines the science they produce. This influence is borne out in the samples they collect and how they define important concepts. Their humanity presents biases and blind spots shaped by each social psychologist's life history, identity, and experiences. Social psychologists, like all human beings, may engage in fraud, bullying, and sexual harassment. The social relationships they form influence who gets hired, promoted, funded, and published, and ultimately, the quality of the science.

## Weird Science

Around the time the previous edition of this *Handbook* was published, researchers at the University of British Columbia, Vancouver, Canada, published an article pointing out what now seems obvious to any social psychology student: Brain and behavioral sciences rely on biased samples (Henrich, Heine, & Norenzayan, 2010b). This built upon work showing Western Industrialized samples, comprising 12% of the global human population, were used in 96% of publications in top psychology journals (Arnett, 2008). Joseph Henrich, Steven Heine, and Ara Norenzayan (2010b) therefore compared samples from industrialized and small-scale societies across the globe, finding that many accepted psychological effects not only did not replicate but often reversed patterns. Visual perception, fairness and cooperation in economic decision-making, folk biological reasoning, spatial cognition, risk aversion, inter-temporal choice, and utility maximization all showed differences across the two kinds of samples. Some phenomena did not show differences; some perceptual illusions, color perception, emotional expression, false belief tasks that assess theory of mind, analog numeracy, cognitive processes underlying social relationships, psychological essentialism, understanding death, and cheater detection did replicate, suggesting they may indeed be human universals (Henrich, Heine, & Norenzayan, 2010a).

While many conversations throughout the history of the field probably touched on the problem of human universals, the publication by those researchers in Canada provided empirical evidence that indeed psychology samples were biased, and effects did not generalize. Part of the answer is simply that undergraduate students are a convenient, cheap, and captive sample. Another possibility is that researchers in social psychology who are predominantly WEIRD themselves only considered other

WEIRD people as relevant when testing their theories. Certainly, there is a history of using empirical evidence to argue that only people of European descent were fully human beings (for an account of some of this earlier dustbin science, see Eberhardt, 2020), including a more recent eugenics movement—the improvement of desired human qualities via selective breeding—that originated at University College London, which featured statisticians, psychologists, and geneticists, including Karl Pearson and Francis Galton, cousin to Charles Darwin. Perhaps this legacy has not left the field and determines the default when researchers want to test their hypotheses.

A host of commentaries and data accompanying Henrich et al. (2010) showed researchers from across the brain and behavioral sciences were aware of this limitation. Researchers argued that almost all aspects of the experimental paradigm were subject to WEIRD bias (Daumaud & Sperber, 2010; Rochat, 2010), such as the contexts used to probe human behavior (Ceci, Kahan, & Braman, 2010; Khemlani, Lee, Bucciarelli, 2010), including their lack of ecological validity (Rai & Fiske, 2010), and the cultural similarity between the researchers and the sample (Fessler, 2010). Bias extended to other approaches to understanding human behavior, including comparative psychology approaches and the captive samples they utilize (Boesch, 2010; Leavens, Bard & Hopkins, 2010), developmental psychology approaches relying on middle-income WEIRD samples (Fernald, 2010; Karasik, Adolphs, Tamis-LeMonda & Bornstein, 2010), linguistic approaches that underestimate the number of languages, failing to consider languages that do not conform to features of WEIRD languages (Majid & Levinson, 2010), and philosophical intuition, the bedrock of empiricism and epistemology (Stich, 2010). This shortcoming impacts real-world applications of science, reinforcing folk psychological concepts borne out in WEIRD cultures (Konecni, 2010; Lancy, 2010).

Given the reader is more than a decade from the publication of the Henrich et al. (2010) paper and commentaries, the internet has proven to be a panacea of sorts and may have obscured the depth of this problem at the time of publication. The internet allows researchers freedom from undergraduate samples and allows them to broaden beyond WEIRD samples, something that already happened even in 2010 (see Gosling, Sandy, John, & Potter, 2010). However, it has not yet gone far enough, because internet access is not evenly distributed across humanity, and the samples are now misrepresentative of all human beings in another way. Moreover, the problem of communicating the research question in the same manner across the diversity of humanity remains (Campbell, 1996; Shweder, 2010). Yet progress has been made and continues to be made; the COVID-19 pandemic led to large-scale international collaborations online, creating large samples and allowing researchers to see both human variance and universality (e.g. Van Bavel, Baicker, Boggio, Capraro, Cichocka, Cikara, et al., 2020). Increased research of this kind that goes beyond self-report measures to physiology may reduce even more bias and allow social psychology to better understand human behavior (Harris, Capestany, & Tan, 2016).

Given the discussion regarding WEIRD science, it may not surprise the reader to note that social psychology has defined culture in a WEIRD manner as well. Henrich et al. (2010a) also make this point, noting that interdependence and independence (collectivism/communalism and individualism) are often attributed to the East and West respectively are not descriptive of all humanity. Culture does not just exist in a historic opposition of Asia with Western Europe and North America, but also in Africa, Central and South America and the Caribbean, Polynesia, Micronesia, and tiny villages in the Middle East. Yet cultural psychology as a sub-field of social psychology used this ideological continuum, despite its manner of stereotyping people from these two parts of the world, while ignoring the rest of humanity. More recent cultural psychology takes a social-ecological approach, focusing more on cultural dynamics than cultural comparisons (see Kashima & Gelfand 2023).

Of course, perhaps the most obvious solution to the problem of WEIRD science is to diversify the researchers, to move away from the dominance of North American and Western European researchers in social psychology (Meadon & Spurrett, 2010). However, this would require global structural change in academia, and given the capitalist global financial model most universities currently operate, it is highly unlikely this outcome will occur in the reader's lifetime.

## ***Open Science Movement***

Perhaps the biggest change in social psychological research results from the OSM (for a comprehensive review of this movement, see Giner-Sorolla, 2024). This movement kicked off with the publication of attempted replications of 100 experiments published in 2008 in high-profile psychology journals (Open Science Collaboration, 2015). One-third to one-half of the experiments replicated, sparking the reproducibility crisis. Many other failed replication attempts of other popular social psychology effects followed, showing a similar pattern. However, it should be noted that some researchers did not consider this as evidence for a replicability crisis (see Gilbert et al., 2016).

Joseph Simmons, Leif Nelson, and Uri Simonsohn (2011) publishing before the reproducibility crisis argued that flexibility in data collection, analysis, and reporting was responsible for failed replication, and provided evidence for their claims using computer simulations and experiments, demonstrating how easy it is to find statistical significance. Most of this flexibility surrounded a failure of the researcher to report something about their experiment, be it previous failed experimental attempts to test the phenomenon (the file drawer effect), a data collection stopping rule (to avoid p-hacking), hypotheses and analysis plan before data collection (to avoid HARKing, see also Kerr, 1998), a list of all the variables tested, results with and without covariates, data exclusions, and other decisions made during data cleaning and preparation.

The arguments discussed above focus on false positives—the incorrect rejection of the null hypothesis, and the resulting claim of statistical significance (Type I errors). However, false positives are but one of the ways bias leaks into scientific research. A focus on the other kind of error present in NHST—missed detection of an effect (Type II errors)—is almost impossible because studies that fail to find a significant result often end up in the metaphorical file drawer (more like a digital folder). Because we do not typically report null effects, it is impossible to know whether other researchers have also attempted and failed to produce a particular effect, or if there is an experimental design or statistical issue that resulted in the null effect. This publication bias has also been addressed with novel approaches (e.g. p-curve; Simonsohn, Nelson, & Simmons, 2014) and registered reports that accept manuscripts before data collection, publishing the results whether or not they achieve statistical significance.

Another perspective rejects NHST altogether and advocates alternate approaches to determining whether an observed difference between experimental conditions is statistically meaningful or due to sampling error. This approach argues that researchers should focus on other statistics when evaluating whether an effect was plausible in the real world or simply an artifact of poor experimental design and analysis. Effect sizes, confidence intervals, and power are the obvious alternate statistical options, and good science reporting always includes these statistics to provide a better context to interpret a p-value (Denis, 2003).

Yet another approach calls for mini-meta-analysis, where researchers perform a meta-analysis on the effects of the multiple experiments social psychologists typically conduct when testing a

research question (Cummings, 2014). Other researchers have called for a switch to Bayesian statistics because it estimates the magnitude of evidence in favor of the null hypothesis (Ortega & Navarrete, 2017). Perhaps the best solution is a compromise that suggests continuing to operate by conducting small-N studies, with adequate reporting and pre-registration, to generate a theory, and then test the theory with a large-N dataset in a collaborative approach among researchers (Sakaluk, 2016).

Co-occurring with the replication crisis were a couple of high-profile scientific fraud cases where researchers were found to have fabricated data (Callaway, 2011; Carpenter, 2012; Couzin-Frankel, 2012; Levelt, Drenth, & Noort, 2012; Vogel, 2011). These cases of blatant fraud rocked the field provided support for the OSM and rooted open science approaches in social psychology that continue to promote best practices today. One can speculate about why these scientists engaged in fraud, but human nature seems to be the answer. Diedrick Stapel, one of the researchers found to have committed fraud, posits such an explanation when attempting to explain his behavior.

I wasn't content with mediocrity; I shut myself away, suppressed my emotions, pushed my morality to one side, and got drunk in success and the desire for answers and solutions. (Stapel, 2014, p. 29)

Perhaps people engage in scientific misconduct for the same reason they sometimes engage in science: for fame, prestige, and status. Stapel also went on to say that if there were "a lid on the cookie jar," he might have been less inclined to behave as he did. Certainly, the academic context has responsibility for imposing such lids and plays a role in enabling such misbehavior.

## THE ACADEMIC CONTEXT

Recent technological advancements and the onset of the digital age have meant a boom in industrial jobs for social psychologists. Social psychologists work at technology companies studying social questions. Perhaps in the future industry will be a bigger employer of social psychologists than universities, but the academy has been around for centuries, so that future may be distant still. Thus, understanding what the academy is and how it functions will clarify its impact on the human beings who conduct social psychology research.

### Problems Of Academia

The stereotype of a professor is an old White man in a tweed jacket (elbow patches of course), replete with pipe and monocle, sitting in an ancient building at an esteemed university. This stereotypical depiction of a professor is informed by a history of academia as the domain for such people. After all, the academy is one of the few institutions where people still wear ceremonial attire (though just at graduation ceremonies and dissertation defenses in most places). This speaks to its long history that relied on gender and race primarily to determine access to societal institutions. Universities pre-date the past few centuries of Western global dominance, but during this period, their system has been consolidated and influenced by the prejudices of the era. For instance, there have been long social media threads where academics yearn for a secretary or personal assistant, as was common just a few short decades ago, to relieve the administrative burden modern academics face. Not only did academics have secretaries, but academics were usually wealthy and were almost always White men. Concepts like childbirth were never considered in their careers, and jobs relied

on supervisors calling up colleagues and did not require research, teaching, and diversity statements. The tenure system functioned as a hazing ritual for new academics, and a stamp of status, not as the only way to earn job security and stability in one's geographic life. Sabbaticals were to be intellectually stimulating voyages to new places, not restricted by concerns around child care, schooling, and dual career partnerships. As such, academia was not created for and has not adjusted to being populated by a more diverse reflection of humanity (Legerwood et al., 2022).

Academics do not all come from well-off backgrounds (though the majority still do, given structural, educational, and economic inequalities in Western societies), are not all men (in fact, social psychology is dominated by women at the lower levels), and most academics certainly no longer have secretaries. Our partner(s) are not always of the opposite gender and have careers themselves. The entire higher education system operates as a funnel, because more doctoral psychology students face fewer tenured positions, suggesting that most people who wish to become academic social psychologists do not have the opportunity. Economists have compared the academic labor market to a drug cartel, with striking similarities (Alfonso, 2013).

An analysis of academia over the period 2011-2020 in the US suggests that “steep hierarchies of prestige” remain: A small number of prestigious universities supply most academics, with eight universities supplying 20% of all faculty (Wapman, Zhang, Clauset, & Larremore, 2022). Though this analysis is across academia, it highlights the impact of status on progressing in the field. Moreover, only 5-23% of academics are employed at a more prestigious university than where they completed their doctoral training, suggesting that universities tend not to hire graduates from institutions that are less prestigious (Wapman et al., 2022).

Academia certainly has changed in the past few decades, yet problems remain. Parental leave can now pause the tenure clock in many places, a small improvement for parents and carers, and encouragement to abandon “tenure babies” who are usually not conceived until tenure is secure. However, biases remain evident in the higher attrition rate for women in the field despite increased hiring (Wapman et al., 2022). Poor social behavior continues to occur—including sexual harassment and academic bullying—in service of asserting power and dominance (Gruber et al., 2021).

## ***Sexual Misconduct And Bullying***

In addition to high-profile cases of academic fraud, the field was also rocked in the 2010s by high-profile cases of sexual misconduct and bullying. Social psychologists were accused of and faced criminal charges related to sexual harassment and sexual assault. Specifically, senior male professors were accused of assaulting female doctoral students. Because such crimes are chronically under-reported, the reader can assume that this practice is more widespread than simply the cases that captured media attention (see Scurich, 2020 for a discussion). An analysis of the life and physical sciences in the US confirms this assumption: students were 1.6 times less likely to report sexual harassment than faculty were, and men were identified as perpetrators 90% of the time (Aguilar & Beck, 2020). The likelihood of reporting further decreases as the victim's status reduces, with undergraduates less likely to report sexual harassment by faculty than doctoral students (Shepela & Levesque, 1998).

Bullying—repeated unwanted behaviors and practices, carried out intentionally or not, which humiliate, offend, and distress, creating an unpleasant working environment (Einarsen & Raknes, 1997)—occurs in academia. The 2010s also saw several reported cases of academic bullying by famous, high-status senior faculty of their lower-status peers (for one such case, see Kupferschmidt,

2018). Research in Canada documents that newly hired and untenured faculty are more likely to experience bullying (McKay, Arnold, Fratzl, & Thomas, 2008).

So how should the field address these problems? While legal action has a role to play in prosecuting criminal behavior, each social psychologist can help eradicate such behaviors. The hierarchical system of academia certainly discourages such courageous behavior because fear of retaliation prevents most people from risking their careers by contesting senior academics. Institutions also have a role to play to ensure that such behaviors are eradicated from the academy. Changes in policy around workplace culture, reporting of misbehavior, and support of junior researchers and students are vital to ensuring that a rogue, powerful academic does not take advantage of their position by harming others.

Oftentimes, such behaviors result from a culture in the academic department or the field that encourages fraternizing between junior and senior colleagues, usually with alcohol. Informal social communication channels in the field report which academics were likely to engage in such behavior at conferences, and which were not, suggesting that these behaviors are not restricted to the victims, and are usually public knowledge with the scientific community. The Society for Personality and Social Psychology (SPSP) and the European Association of Social Psychology (EASP) have both made changes to the way conferences are conducted, separating students and faculty in rooming, and publishing official statements on the acceptability of these practices, and recourses victims can take if experiencing such behavior. But these solutions are a drop in the bucket since the hierarchical system of academia remains. Supervisors hold tremendous power over their students, as do senior academics over junior colleagues. Any real solution requires tackling such structural problems, changing the way we promote, hire, tenure, and admit people into the field, and influencing how people are evaluated, viewed, admired, and respected.

## ***Personal Relationships***

As human beings, social psychologists rely on social networks, not just for their non-academic lives, but to drive their academic work as well. Collaboration is a major component of scientific investigation, and researchers actively collaborate when their interests align. However, personal relationships also matter, and many people choose to work together not because of mutual interests, but friendships. Personal relationships based on both liking and respect influence all aspects of the scientific process and the field beyond collaboration, including peer-review and publishing, hiring, and research funding.

What research is available highlights a gender difference in the utility of personal relationships for career progression; interviews with business school faculty in the US found that women focussed on negative relationships and the harm they caused to their careers, while men focussed on positive relationships and the help they provided (Gersick, Dutton, & Bartunek, 2000). Examining consensual sexual relationships between students and professors specifically, a fascinating qualitative study by Marcia Bellas and Jennifer Gossett (2001) found two-thirds of their participants claimed the student initiated the sexual relationship, or it occurred mutually. However, students, in particular, highlighted the power dynamic as the greatest detriment of these relationships, suggesting that the chasm between faculty members and students does affect the viability of such relationships.

Most universities now have policies against such relationships, but the culture in academia does not frown upon such behavior; supervisors sometimes marry their former supervisees, and colleagues

occasionally engage in romantic relationships. But intimate relationships are not the only human behavior that influences the field; feuds and the general competitive nature of the scientific enterprise lead to knowledge hiding rather than sharing, restricting the advancement of the field (Hernaus, Cerne, Connelly, Vokic, & Škerlavaj, 2018).

## Perception Of The Social Psychologist

Social psychology suffers from studying social behavior, where most human beings hold expertise. Because people must navigate complex social environments to survive, the neurotypical human being can generate folk psychological explanations for human behavior. In Fritz Heider's (1958) description, human beings are *naïve scientists* who observe other people's behavior, test theories, and find evidence that either supports or refutes these theories, shaping behavior and folk psychology in the future. Social psychologists are no different because we are human beings. If anything, we are human beings who think we excel at folk psychology and often rely on our intuitions to inform our theorizing and predictions.

Folk psychology has affected the perception of social psychologists and has shaped it as a field. Some undergraduates in social psychology classes remark that the findings in the field are not surprising, or they were already aware from their intuitions of why people engaged in certain social behaviors. As such, they are more likely to discount the importance of the field and challenge the validity of the science.

Again, this heuristic linking "surprise" to "valid" is present in social psychologists as well. For instance, most people may assume that medical professionals like doctors and nurses are highly empathic people. Folk psychology suggests that doctors help people, and empathic people help people, ergo, doctors are empathic. Entrance exams to medical schools even selected for this psychological trait. However, recent evidence suggests that the longer medical professionals have been in the field, the less trait empathy they report (Delgado, Bonache, Betancort, Morera, & Harris, 2021). Moreover, empathy is positively correlated with burnout, suggesting that medical professionals who endure may have successfully regulated their empathic response to stave off burnout (Delgado et al., 2021). Demonstrating that medical professionals are not empathic is counterintuitive. Such nonobvious findings fill the pages of social psychological journals. However, this does not invalidate the intuition since the scientific method does not provide evidence to refute the claim that doctors are not empathic. Stated differently, the empathic nature of doctors cannot be proven with NHST.

Moreover, most folk psychological intuitions are untested, so there is no scientific evidence whether they are indeed true. Yet there is a relative dearth of research testing these intuitions because they appear obvious to us naïve scientists, and therefore uninteresting. In addition, researchers are aware of the bias favoring counterintuitive findings and are therefore more likely to explore such phenomena.

Perhaps because of these perceptions, social psychology tends to hold itself to a high scientific standard. As mentioned, unlike economics—which also suffered from similar folk psychology explanations for behavior but made a mathematical turn to bolster their theories—social psychology has largely relied on the scientific method as a way of validating the theories and findings in the field. Therefore, the quality of the experimental design and statistical analyses is higher in social psychology.

Folk psychology affects how others outside of social psychology, beyond students, evaluate the field. In Western Europe, social psychology holds a more revered position possibly because of the events of World War II and the importance of obedience, propaganda, misinformation, and group processes on people's behavior. There, one can find entire departments of social psychology. These perceptions inform resource allocation decisions in universities, where resources for researchers depend on the status of their field. More than one psychology department has either split up or houses severe animosity between researchers because of disputes between the sub-fields fuelled by resource allocations. Therefore, not every social psychologist works in the same kind of academic environment.

## ***Relation Of Social Psychology To Other Disciplines***

Social psychology does not exist in isolation but with the other academic disciplines influenced by and influencing it. Perhaps the most interesting relationship is with personality psychology. The juxtaposition of personality and social psychology is such that one field's error variance is the other's main effect (or predictor)—an awkward yet convenient marriage (see Robins & Benet-Martinez, 2023). Social psychology explores the power of the situations, examining how most people's behavior conforms to the social context. Personality psychology explores the power of the individual, examining how most people's behaviors are invariant across situations. Thus, though both fields study social behavior, their perspective on it, and the importance of nature versus nurture are vastly different. Nonetheless, the two fields have maintained an amicable relationship, sharing societies, journals, and research topics.

Social psychology also sits in the pantheon of behavioral sciences, including behavioral economics, experimental philosophy, sociology, political science, and anthropology. Each field holds different ground truths that influence their theorizing and focus despite all being concerned with understanding human behavior. Within this pantheon of disciplines, there is a hierarchy as well, with economics sitting at the top and receiving more attention, funding, and a higher level of influence in policy and business. Nonetheless, because of the overlap of topics across these disciplines, modern researchers often move between them, borrowing paradigms, theories, and models in a quest to understand human behavior.

Social psychology is also the parent discipline for several other fields. Social psychologists populate the faculty in departments concerned with communication science, cultural psychology, management, industrial, organizational, and business studies, law and policy, education, and health. They have also played a role in the shift in cognitive neuroscience to more social neuroscience questions because of the importance of the social context. Currently, social psychology also plays a central role in data science relative to AI and social robots because the problems these disciplines must solve require understanding human behavior.

## **THE FUTURE OF THE HUMAN IN SOCIAL PSYCHOLOGY**

Human evolution is an ongoing process, and whatever version of the human species that survives the climate crisis will probably differ from modern humans. The brain, however, evolves much more slowly, taking roughly 2.5 million years to double in size relative to our closest genetic hominid ancestor (Carroll, 2003). Therefore, many of the psychological mechanisms underlying



behavior may be very similar to those of modern humans. As such, social psychology in the future may appear very similar in many respects to the academic field today.

## Big Data

Imagine a future where AI selects research questions, generates hypotheses, designs tests, and reports results. Such a future may seem dystopian to some but provides experimental control for the impact of human beings on the study of human behavior. Of course, these future AI will be designed by humans, so unless there is another architect, human biases may be built in. Yet technology does promise a potential path for improving our science. In the near-to-medium-term future, it seems that algorithms will aggregate big data—data derived from Web 2.0 internet and related mobile technologies—to predict and explain behavior (Hernandez, 2020). Big data is different from traditional data collected by social psychologists in volume, complexity, frequency, and authenticity because it measures real-world behaviors. This high ecological validity, along with the ease of collecting and analyzing such data, given advances in computing, makes it an appealing option for social psychologists, and I expect such work to further populate the pages of social psychology journals.

Specifically, the increased volume of data points provided by big data results in greater statistical power. The increased complexity allows the data to fit with modeling approaches popular in the current computational revolution. Such complexity also allows the researcher to explore multiple variables at once, important given the multiply-determined nature of social behavior, and the complexity of the social context. The increased frequency allows for repeated measurement of the same individual, and limited noise across the different predictors or independent variables. It also allows the research to track dynamic relationships between the variables of interest over time, something that could only previously be achieved via time-intensive longitudinal designs. Finally, the increased authenticity frees the researcher from laboratory approaches that sometimes lack ecological validity because big-data participants are situated in real-world social contexts when engaging in the captured behaviors.

Despite these advantages, big data has several drawbacks that researchers should keep in mind. The first, and most obvious drawback is the correlational nature of big data. Social psychology has always prided itself on its empirical approach to social behavior, relying primarily not on quasi-experimental designs, but designs where manipulation of the independent variable and control of potential confounding variables are the goals during experiment design. Big data approaches, however, are primarily quasi-experimental because researchers do not manipulate and control the variables as they would in the lab. Moreover, the analyses are all relational or associative, as is the case with computational approaches. However, recent methodological advances are pushing these boundaries; researchers demonstrate mega-study approaches, where big datasets are used with experimental manipulation (Eskreis-Winkler, Milkman, Gromet, & Duckworth, 2019; Milkman et al., 2020; 2021).

Another drawback of big data approaches is that, like all regressions, what you put in is what you get out. As such, societal biases will be reflected in big data. For instance, simply considering that big data often relies on behavior collected by the use of technology suggests that anyone without such technology is automatically excluded from the data set. Given that people of lower social class are often also technologically poor due to the costs associated with owning devices and paying for internet access (Shambare, 2014; Stork, Calandro, & Gillwald, 2013), big data approaches risk

continuing exclusion of such people from the dataset. Moreover, social group differences of race, gender, age, ethnicity, religion political values, and sexual orientation all influence what technologies people use. Therefore, if researchers rely on a particular source (e.g., TikTok) to collect data, then people less likely to use the service (e.g., older people) are excluded. Finally, bias built into the data related to how different people can use the technology also biases the dataset. For instance, people who suffer from social anxiety and loneliness use social media platforms for different reasons (O'Day & Heimberg, 2021), adding bias to the dataset.

Some of the drawbacks just described can be leveled at more traditional approaches to data in social psychology. However, the risk with big data is that such biases can be entrenched because consumers of the research may attribute enhanced validity to the results, given the smaller probability values, smaller variance, and complex computational and network models that often accompany such big data approaches. The logic may go as follows: if an algorithm results in a particular conclusion, then it must be unbiased because it is not a person. Therefore, much like neuroscience approaches, big data approaches hold the potential for enhancing biases under the cover of perceived scientific validity. Researchers must be aware of this potential for bias, and take appropriate measures to counteract it by acknowledging the limits of the big-data approach when drawing their conclusions from the research.

Big-data approaches also make sound scientific theorizing even more important. The theory informs the computational model, which determines the algorithms and analyses that are applied to big datasets. Therefore, researchers must rely on theorizing, not just the output of the analysis, to draw conclusions about human behavior. This reliance is consistent with current calls for increased theorizing in social psychology (Syed, 2021) and would benefit the field as a whole.

## **Interdisciplinarity**

Another safe bet for the future of social psychology is further interdisciplinarity. The field focuses on human behavior, a phenomenon relevant to many other academic disciplines, as well as multiple local and global problems facing life on this planet. The COVID-19 pandemic demonstrated the importance of behavioral science for dealing with public health. Multiple social unrests reinforce the need for an understanding of human behavior not only to resolve conflict but also to understand the contextual features that give rise to such behaviors, allowing prediction of when such behaviors are likely to occur. Knowledge of human behavior is critical if we are to solve global coordination challenges such as climate change. Therefore, disciplines that more directly address these and related challenges need social psychology to make progress on these issues.

But what might an interdisciplinary social psychologist of the future look like? How might this person be trained? Perhaps there will be more of a reliance on team science approaches, and social psychologists will be among the other disciplines necessary for addressing a specific research question or challenge. Perhaps new disciplines will emerge, such as affective computing, that will provide additional housing for social psychology graduates and be the seat of novel interdisciplinary approaches to understanding human behavior.

In addition to increased interdisciplinarity, there will be more revolutions to sweep through the field. Each revolution requires interdisciplinarity, and future ones will likely involve physical, chemical, and further genetic/biological revolutions. These revolutions will enhance our ability to

accurately do the difficult task of understanding human behavior, and the field will have to embrace them to continue making scientific progress.

## Structural Changes To Academia

The other place where the reader can expect changes that impact social psychology in the future is the inevitable and long overdue structural reorganization of both academia and the related institutions and mechanisms that support science. Already, massive attempts are underway to make the academy more diverse and inclusive, again in service of improving the science (see Harris, 2022, for a similar argument). However, a more diverse and inclusive academy can only be achieved by structural changes. Not only are policies required that provide equity, but archaic systems no longer fit for purpose in the modern world must be abandoned for practices better suited to improving the quality of the science. For instance, many US doctoral programs have abandoned the use of standardized testing as an admission requirement. Such testing may be biased against people from minority backgrounds, disadvantaging their applications, given stereotype threat effects (Steele, 1997). Instead, admission criteria such as distance traveled, where the admission panel assesses how far the student has come given their background (socioeconomic status, ethnicity, race, and nationality), pre-tertiary education, university, and improvement over their bachelor's career, are in the direction of travel needed for such improvements. However, many universities are returning to standardized tests because of the lack of evidence regarding disadvantage.

Not only are structural changes required, but each researcher must adopt new best practices to improve the quality of the science. This has begun with the OSM, but further best practice is required if the field is to meet the challenges of human behavior in the future. Given that people constitute institutions, such changes in best practices will also drive structural changes in the academy. These changes can mitigate and empower their presence in social psychology research.

## AFTERWORD

This chapter discussed topics that are typically only ever brought up at bars in conferences, not in the pages of *The Handbook of Social Psychology*. It has attempted to lay out the challenge of conducting experiments on human behavior while being human. The author hopes the reader has found the conversation interesting, and that it stimulates debate among doctoral students as they find their place in the field. The author also acknowledges that he has not fully addressed his biases. For that, he humbly apologizes and hopes that future editions of *The Handbook* make up for his shortcomings. The chapter ends with an appeal to the reader, as a researcher: Be vigilant regarding the impact of the self on the experiment, not only during data collection but every aspect of the scientific process.

## REFERENCES

- Afonso, A. (2013). How academia resembles a drug gang.  
<http://blogs.lse.ac.uk/impactofsocialsciences/2013/12/11/how-academia-resembles-a-drug-gang/>

- Aguilar, S. J. & Baek, C. (2020). Sexual harassment in academe is underreported, especially by students in the life and physical sciences. *PloS ONE* 15(3): e0230312. <https://doi.org/10.1371/journal.pone.0230312>
- Allport, G. W. (1954). *The nature of prejudice*. New York: Addison-Wesley.
- Alter, A. L., & Oppenheimer, D. M. (2009). Uniting the tribes of fluency to form a metacognitive nation. *Personality and Social Psychology Review*, 13(3), 219-235. <https://doi.org/10.1177/1088868309341564>
- American Psychological Association. (2019). *The Academic Psychology Workforce: Characteristics of Psychology Research Doctorates in Faculty Positions (1995-2015)*. Washington, DC: L. Lin, P. Christidis, K. Stamm, & J. Conroy. <https://www.apa.org/workforce/publications/academic-psychology.pdf>
- Anderson, N. H. (1974). Information integration: A brief survey. In D. H. Krantz, R. C. Atkinson, R. D. Luce, & P. Suppes (Eds.), *Contemporary Developments in Mathematical Psychology* (pp. 236-305). San Francisco: Freeman.
- Arnett, J. J. (2008). The neglected 95%: Why American Psychology Needs to Become less American. *American Psychologist*, 63(7), 602-614. <https://doi.org/10.1037/0003-066X.63.7.602>
- Aronson, E. (1992). The return of the repressed: Dissonance theory makes a comeback. *Psychological Inquiry*, 3(4), 303-311. [https://doi.org/10.1207/s15327965pli0304\\_1](https://doi.org/10.1207/s15327965pli0304_1)
- Aronson, E., Wilson, T., & Brewer, M. B. (1998). Experimentation in social psychology. In D. Gilbert, S. Fiske, & G. Lindzey (Eds.). *The Handbook of Social Psychology* (Vol. 1, pp. 99-142).
- Aspinwall, L. G., Brown, T. R., & Tabery, J. (2012). The double-edged sword: does biomechanism increase or decrease judges' sentencing of psychopaths?. *Science*, 337(6096), 846-849. <https://doi.org/10.1126/science.1219569>
- Augustine, B. (2014). *The rise and fall of social psychology: The use and misuse of the experimental method*. Routledge.
- Bastiaansen, J. A., Kunkels, Y. K., Blaauw, F. J., Boker, S. M., Ceulemans, E., Chen, M., ... & Bringmann, L. F. (2020). Time to get personal? The impact of researchers' choices on the selection of treatment targets using the experience sampling methodology. *Journal of Psychosomatic Research*, 137, 110211. <https://doi.org/10.1016/j.jpsychores.2020.110211>
- Batson, C. D. (1987). Prosocial motivation: Is it ever truly altruistic?. In *Advances in Experimental Social Psychology* (Vol. 20, pp. 65-122). Academic Press.
- Baumeister, R. F., Vohs, K. D., & Funder, D. C. (2007). Psychology as the science of self-reports and finger movements: Whatever happened to actual behavior?. *Perspectives on psychological science*, 2(4), 396-403. <https://doi.org/10.1111/j.1745-6916.2007.00051.x>
- Bellas, M. L., & Gossett, J. L. (2001). Love or the "lecherous professor": Consensual sexual relationships between professors and students. *Sociological Quarterly*, 42(4), 529-558.

<https://doi.org/10.1111/j.1533-8525.2001.tb01779.x>

Blass, T. (1992). The social psychology of Stanley Milgram. In *Advances in Experimental Social Psychology* (Vol. 25, pp. 277-329). Academic Press.

Bloom, P. (2017). *Against empathy: The case for rational compassion*. Random House.

Botvinik-Nezer, R., Holzmeister, F., Camerer, C. F., Dreber, A., Huber, J., Johannesson, M., ... & Rieck, J. R. (2020). Variability in the analysis of a single neuroimaging dataset by many teams. *Nature*, 582(7810), 84-88. <https://doi.org/10.1038/s41586-020-2314-9>

Breslau, D., & Yonay, Y. (1999). Beyond metaphor: Mathematical models in economics as empirical research. *Science in Context*, 12(2), 317-332. <https://doi:10.1017/S0269889700003446>

Breznau, N., Rinke, E. M., Wuttke, A., Nguyen, H. H., Adem, M., Adriaans, J., ... & Van Assche, J. (2022). Observing many researchers using the same data and hypothesis reveals a hidden universe of uncertainty. *Proceedings of the National Academy of Sciences*, 119(44), e2203150119. <https://doi.org/10.1073/pnas.2203150119>

Cacioppo, J. T., Berntson, G. G., Lorig, T. S., Norris, C. J., Rickett, E., & Nusbaum, H. (2003). Just because you're imaging the brain doesn't mean you can stop using your head: A primer and set of first principles. *Journal of Personality and Social Psychology*, 85(4), 650-661. <https://doi.org/10.1037/0022-3514.85.4.650>

Callaway, E. (2011). Report finds massive fraud at Dutch universities. *Nature* 479, 15. <https://doi.org/10.1038/479015a>

Cameron, C. D., Hutcherson, C. A., Ferguson, A. M., Scheffer, J. A., Hadjiandreou, E., & Inzlicht, M. (2019). Empathy is hard work: People choose to avoid empathy because of its cognitive costs. *Journal of Experimental Psychology: General*, 148(6), 962-976. <https://doi.org/10.1037/xge0000595>

Campbell, R., & Wales, R. (1970). The study of language acquisition. In J. Lyons (ed.) *New Horizons in Linguistics*. Pp. 242-260. Penguin Books.

Carpenter, S. (2012). Harvard psychology researcher committed fraud, U.S. investigation concludes. *Science*. <https://doi.org/10.1126/article.26972>

Carroll, S. B. (2003). Genetics and the making of Homo sapiens. In R. L. Ciochon & J. G. Fleagle (eds.) *Human Evolution Source Book*. Routledge.

Chaney, F. B., & Owens, W. A. (1964). Life history antecedents of sales, research, and general engineering interest. *Journal of Applied Psychology*, 48(2), 101-105. <https://doi.org/10.1037/h0042035>

Chomsky, N. (1968). *Language and Mind*. New York: Harcourt, Brace & World.

Couzin-Frankel (2012). Harvard misconduct investigation of psychologist released. *Science*. <https://doi.org/10.1126/article.23036>

- Cumming, G. (2014). The new statistics: Why and how. *Psychological Science*, 25(1), 7-29.  
<https://doi.org/10.1177/0956797613504966>
- Davidson, I. J. (2018). The (ab)normal-social-personality catena: Exploring The Journal of Abnormal and Social Psychology during the interwar years. *History of Psychology*, 21(2), 151-171.  
<https://doi.org/10.1037/hop0000090>
- Delgado, N., Bonache, H., Betancort, M., Morera, Y., & Harris, L. T. (2021). Understanding the links between inferring mental states, empathy, and burnout in medical contexts. *Healthcare* 9, 158. <https://doi.org/10.3390/healthcare9020158>
- Delgado, N., Delgado, J., Betancort, M., Bonache, H., & Harris, L. T. (2023). What is the Link Between Different Components of Empathy and Burnout in Healthcare Professionals? A Systematic Review and Meta-Analysis. *Psychology Research and Behavior Management*, 16, 447-463.  
<https://doi.org/10.2147/PRBM.S384247>
- Denis, D. J. (2003). Alternatives to null hypothesis significance testing. *Theory & Science*, 4(1), 21.  
[https://theoryandscience.icaap.org/content/vol4.1/02\\_denis.html](https://theoryandscience.icaap.org/content/vol4.1/02_denis.html)
- Descartes, R. (1637). *Discourse on the method for conducting one's reason well and for seeking the truth in the sciences*. Adam and Tannery, Vol 6.
- Duarte, J. L., Crawford, J. T., Stern, C., Haidt, J., Jussim, L., & Tetlock, P. E. (2015). Political diversity will improve social psychological science 1. *Behavioral and Brain Sciences*, 38, e130.  
<https://doi.org/10.1017/S0140525X14000430>
- Einarsen, S., & Skogstad, A. (1996). Bullying at work: Epidemiological findings in public and private organizations. *European Journal of Work and Organizational Psychology*, 5, 185-202.  
<https://doi.org/10.1080/13594329608414854>
- Eskreis-Winkler, L., Milkman, K. L., Gromet, D. M., & Duckworth, A. L. (2019). A large-scale field experiment shows giving advice improves academic outcomes for the advisor. *Proceedings of the national academy of sciences*, 116(30), 14808-14810.  
<https://doi.org/10.1073/pnas.1908779116>
- Fiedler, K. (2011). Voodoo correlations are everywhere—not only in neuroscience. *Perspectives on Psychological Science*, 6(2), 163-171. <https://doi.org/10.1177/1745691611400237>
- Finlay, L. (1998). Reflexivity: an essential component for all research?. *British Journal of Occupational Therapy*, 61(10), 453-456. <https://doi.org/10.1177/030802269806101005>
- Fiske, S. T. (1980). Attention and weight in person perception: The impact of negative and extreme behavior. *Journal of Personality and Social Psychology*, 38(6), 889-906.  
<https://doi.org/10.1037/0022-3514.38.6.889>
- Fiske, S. T., & Neuberg, S. L. (1990). A continuum of impression formation, from category-based to individuating processes: Influences of information and motivation on attention and interpretation. In *Advances in experimental social psychology* (Vol. 23, pp. 1-74). Academic Press.



- Freeman, J. (2018). LGBTQ scientists are still left out. *Nature*, 559, 27-28.  
<https://doi.org/10.1038/d41586-018-05587-y>
- Freeman, J. B. (2020). Measuring and resolving LGBTQ disparities in STEM. *Policy Insights from the Behavioral and Brain Sciences*, 7(2), 141-148. <https://doi.org/10.1177/2372732220943232>
- Freeman, J. B. (2021). STEM disparities we must measure. *Science*, 374(6573), 1333-1334.  
<https://doi.org/10.1126/science.abn1103>
- Freeman, J. (2022). World view. *Nature*, 612, 191. <https://doi.org/10.1038/d41586-022-04331-x>
- Gentili, C., & Cristea, I. A. (2020). Challenges and opportunities for human behavior research in the coronavirus disease (COVID-19) pandemic. *Frontiers in Psychology*, 11, 1786.  
<https://doi.org/10.3389/fpsyg.2020.01786>.
- Gersick, C. J., Dutton, J. E., & Bartunek, J. M. (2000). Learning from academia: The importance of relationships in professional life. *Academy of Management Journal*, 43(6), 1026-1044.  
<https://doi.org/10.5465/1556333>
- Gilbert, D. T., King, G., Pettigrew, S., & Wilson, T. (2016). Comment on 'Estimating the Reproducibility of Psychological Science'. *Science*, 351(6277), 1037a-1037b.  
<https://doi.org/10.1126/science.aad7243>
- Gilbert, D. T., & Malone, P. S. (1995). The correspondence bias. *Psychological Bulletin*, 117(1), 21-38.  
<https://doi.org/10.1037/0033-2909.117.1.21>
- Glimcher, P. W., & Rustichini, A. (2004). Neuroeconomics: the consilience of brain and decision. *Science*, 306(5695), 447-452. <https://doi.org/10.1126/science.1102566>
- Gosling, S. D., Vazire, S., Srivastava, S., & John, O. P. (2004). Should We Trust Web-Based Studies? A Comparative Analysis of Six Preconceptions About Internet Questionnaires. *American Psychologist*, 59(2), 93-104. <https://doi.org/10.1037/0003-066X.59.2.93>
- Gruber, J., Mendle, J., Lindquist, K. A., Schmader, T., Clark, L. A., Bliss-Moreau, E., ... Williams, L. A. (2021). The Future of Women in Psychological Science. *Perspectives on Psychological Science*, 16(3), 483-516. <https://doi.org/10.1177/1745691620952789>
- Haidt, J., & Jussim, L. (2016). Psychological science and viewpoint diversity. *APS Observer*, 29(2).  
<https://www.psychologicalscience.org/observer/psychological-science-and-viewpoint-diversity>
- Harris, L. T. (2022). What Can Affective Science Contribute to Eradicating Structural Racism?. *Affective Science*, 3(1), 1-4. <https://soi.org/10.1007/s42761-022-00110-z>
- Harris, L. T., Capestany, B. H., & Tan, J. (2016). How next-generation neuroscience technologies can facilitate comparison across cultural contexts and species: Implications for global health. In J. Chiao, S-C. Li, R. Seligman, & R. Turner (Eds.). *The Oxford Handbook of Cultural Neuroscience, Vol II*, Oxford University Press, pp-237-248.

- Hastie, R., Ostrom, T., Ebbesen, E., Wyer, R., Hamilton, D., & Carlston, D. (1980). *Person Memory: The Cognitive Basis of Social Perception*. Psychology Press.
- Hastorf, A. H., & Cantril, H. (1954). They saw a game; a case study. *The Journal of Abnormal and Social Psychology*, 49(1), 129-134. <https://doi.org/10.1037/h0057880>
- Haxby, J. V., Gobbini, M. I., Furey, M. L., Ishai, A., Schouten, J. L., & Pietrini, P. (2001). Distributed and overlapping representations of faces and objects in ventral temporal cortex. *Science*, 293(5539), 2425-2430. <https://doi.org/10.1126/science.1063736>
- Heider, F. (1958). Perceiving the other person. In F. Heider, *The Psychology of interpersonal relations* (pp. 20–58). John Wiley & Sons Inc. <https://doi.org/10.1037/10628-002>
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world?. *Behavioral and Brain Sciences*, 33(2-3), 61-83. <https://doi.org/10.1017/S0140525X0999152X>
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). Most people are not WEIRD. *Nature*, 466(7302), 29-29. <https://doi.org/10.1038/466029a>
- Hernandez, I. (2020). Big data in social psychology. In S. E. Woo, L. Tay, & R. W. Proctor (Eds.), *Big data in psychological research* (pp. 227–254). American Psychological Association. <https://doi.org/10.1037/0000193-011>
- Hernaus, T., Cerne, M., Connelly, C., Vokic, N. P., & Škerlavaj, M. (2018). Evasive knowledge hiding in academia: when competitive individuals are asked to collaborate. *Journal of Knowledge Management*, 23(4), 597-618. <https://doi.org/10.1108/JKM-11-2017-0531>
- Honeycutt, N., & Jussim, L. (2020). A model of political bias in social science research. *Psychological Inquiry*, 31(1), 73-85. <https://doi.org/10.1080/1047840X.2020.1722600>
- Hope, E. C., Brugh, C. S., & Nance, A. (2019). In search of a critical stance: Applying qualitative research practices for critical quantitative research in psychology. *Community Psychology in Global Perspective*, 5(2), 63-69. <https://doi.org/10.1285/i24212113v5i2p63>
- Hovland, C. I., Lumsdaine, A. A., Sheffield, F. D. (1949). *Experiments on mass communication*. Princeton University Press; Princeton, NJ.
- Humphrey, N. K. (1976). The social function of intellect. In P. P. G. Bateson & R. A. Hinde, *Growing Points in Ethology*, pp. 303- 317, Cambridge University Press.
- Inbar, Y. & Lammers, J. (2012) Political diversity in social and personality psychology. *Perspectives on Psychological Science* 7(5), 496–503. <https://doi.org/10.1177/1745691612448792>
- Jafar, A. J. N. (2018). What is positionality and should it be expressed in quantitative studies? *Emergency Medicine Journal*, 35. 323-324. <https://doi.org/10.1136/emered-2017-207158>
- Jamieson, M. K., Govaart, G. H., & Pownall, M. (2022). Reflexivity in Quantitative Research: A Rationale and Beginner's Guide. <https://doi.org/10.31234/osf.io/xvrhm>



- Jussim, L., Crawford, J. T., Anglin, S. M., & Stevens, S. T. (2015). Ideological bias in social psychological research. In J. P. Forgas, K. Fiedler, & W. D. Crano (eds.) *Social Psychology and Politics*, pp. 107-126, Psychology Press. <https://doi.org/10.4324/9781315717104>
- Jussim, L., Crawford, J. T., Stevens, S. T., & Anglin, S. M. (2016). The politics of social psychological science: Distortions in the social psychology of intergroup relations. In P. Valdesolo & J. Graham, *Social Psychology of Political Polarization*, pp. 165-196, Routledge. <https://doi.org/10.4324/9781315644387>
- Kelley, H. H. (1972). Attribution in social interaction. In: Jones, E. E., Kanouse, D. E., Kelley, H. H., Nisbett, R. E., Valins, S., Weiner, B. (Eds.), *Attribution: Perceiving the Cause of Behavior*. Lawrence Elbaum and Associates, Hillsdale, NJ, pp. 1-26.
- Kingdon, C. (2005). Reflexivity: Not just a qualitative methodological research tool. *British Journal of Midwifery*, 13(10), 622-627. <https://doi.org/10.12968/bjom.2005.13.10.19835>
- Konnikova, M. (2014). Is social psychology biased against Republicans? *The New Yorker*, 30. <https://www.newyorker.com/science/maria-konnikova/social-psychology-biased-republicans>
- Kulberg, G. E., & Owens, W. A. (1960). Some life history antecedents of engineering interests. *Journal of Educational Psychology*, 51(1), 26-31. <https://doi.org/10.1037/h0039147>
- Kupferschmidt, K. (2018). She's the world's top empathy researcher. But colleagues say she bullied and intimidated them. *Science*. <https://doi.org/10.1126/science.aav0199>
- Larson, E. J., & Witham, L. (1998). Leading scientists still reject God. *Nature*, 394(6691), 313-313. <https://doi.org/10.1038/28478>
- Lavelle-Hill, R., Mazumder, A., Goulding, J., Smith, G., and Landman, T. (2021). Machine learning methods for “wicked” problems: exploring the complex drivers of modern slavery. *Humanities and Social Sciences Communications*, 8, 274 (2021). <https://doi.org/10.1057/s41599-021-00938-z>
- Ledgerwood, A., Hudson, S. K. T. J., Lewis Jr, N. A., Maddox, K. B., Pickett, C. L., Remedios, J. D., ... & Wilkins, C. L. (2022). The pandemic as a portal: Reimagining psychological science as truly open and inclusive. *Perspectives on Psychological Science*, 17456916211036654. <https://doi.org/10.1177/17456916211036654>
- Levelt, W. J., Drenth, P. J. D., & Noort, E. (2012). Flawed science: The fraudulent research practices of social psychologist Diederik Stapel. [https://pure.mpg.de/rest/items/item\\_1569964/component/file\\_1569966/content](https://pure.mpg.de/rest/items/item_1569964/component/file_1569966/content)
- Linville, P. W. (1985). Self-complexity and affective extremity: Don't put all of your eggs in one cognitive basket. *Social Cognition*, 3(1), 94-120. <https://doi.org/10.1521/soco.1985.3.1.94>
- Locke, J. (1690). *An Essay Concerning Human Understanding* (1<sup>st</sup> ed.). Vol 1 London: Thomas Basset.

- Loewenstein, G., Rick, S., & Cohen, J. D. (2008). Neuroeconomics. *Annual Review of Psychology*, 59, 647-672. <https://doi.org/10.1146/annurev.psych.59.103006.093710>
- Lumsdaine, A. A. (1984). Mass communication experiments in wartime and thereafter. *Social Psychology Quarterly*, 47(2), 198-206. <https://doi.org/10.2307/3033950>
- Mason, W. A., Conrey, F. R., & Smith, E. R. (2007). Situating social influence processes: Dynamic, multidirectional flows of influence within social networks. *Personality and Social Psychology Review*, 11, 279 -300. <https://doi:10.1177/1088868307301032>
- McCabe, D. P., & Castel, A. D. (2008). Seeing is believing: The effect of brain images on judgments of scientific reasoning. *Cognition*, 107(1), 343-352. <https://doi.org/10.1016/j.cognition.2007.07.017>
- McClintock, C. G., Spaulding, C. B. & Turner, H. A. (1965) Political orientation of academically affiliated psychologists. *American Psychologist*, 20, 211-21. <https://psycnet.apa.org/doi/10.1037/h0022172>
- McKay, R., Arnold, D. H., Fratzl, J., & Thomas, R. (2008). Workplace bullying in academia: A Canadian study. *Employee Responsibility and Rights Journal*, 20, 77-100. <https://doi.org/10.1007/s10672-008-9073-3>
- Milkman, K. L., Patel, M. S., Gandhi, L., Graci, H. N., Gromet, D. M., Ho, H., ... & Duckworth, A. L. (2021). A megastudy of text-based nudges encouraging patients to get vaccinated at an upcoming doctor's appointment. *Proceedings of the National Academy of Sciences*, 118(20), e2101165118. <https://doi.org/10.1073/pnas.2101165118>
- Milkman, K. L., Gandhi, L., Patel, M. S., Graci, H. N., Gromet, D. M., Ho, H., ... & Duckworth, A. L. (2022). A 680,000-person megastudy of nudges to encourage vaccination in pharmacies. *Proceedings of the National Academy of Sciences*, 119(6), e2115126119. <https://doi.org/10.1073/pnas.2115126119>
- Milgram, S. (1963). Behavioral study of obedience. *The Journal of Abnormal and Social Psychology*, 67(4), 371-378. <https://doi.org/10.1037/h0040525>
- Milgram, S. (1974). *Obedience to authority: An experimental view*. New York: Harper and Row.
- Miller, D. T., & Laurin, K. (2025). History of social psychology: Four enduring tensions. In D. T. Gilbert, S. T. Fiske, E. J. Finkel, & W. B. Mendes (Eds.), *The handbook of social psychology* (6th ed.). Situational Press. <https://doi.org/10.70400/DCSX1997>
- Nadelhoffer, T., & Sinnott-Armstrong, W. (2012). Neurolaw and neuroprediction: Potential promises and perils. *Philosophy Compass*, 7(9), 631-642. <https://doi.org/10.1111/j.1747-9991.2012.00494.x>
- Nosek, B. A., Banaji, M. R., & Greenwald, A. G. (2002). E-research: Ethics, security, design, and control in psychological research on the Internet. *Journal of Social Issues*, 58(1), 161-176. <https://doi.org/10.1111/1540-4560.00254>

- Nyúl, B., Lantos, N. A., Reicher, S. D., & Kende, A. (2021). The limits of gender and regional diversity in the European Association of Social Psychology. *European Journal of Social Psychology*, 51(4-5), 800-819. <https://doi.org/10.1002/ejsp.2774>
- O'Day, E. B., & Heimberg, R. G. (2021). Social media use, social anxiety, and loneliness: A systematic review. *Computers in Human Behavior Reports*, 3, 100070. <https://doi.org/10.1016/j.chbr.2021.100070>
- Open Science Collaboration. (2015). Estimating the reproducibility of psychological science. *Science*, 349(6251), aac4716. <https://doi.org/10.1126/science.aac4716>
- Orne, M. T. (1962). On the social psychology of the psychological experiment: With particular reference to demand characteristics and their implications. *American Psychologist*, 17, 776-783. <https://doi.org/10.1037/h0043424>
- Ortega, A., & Navarrete, G. (2017). Bayesian hypothesis testing: an alternative to null hypothesis significance testing (NHST) in psychology and social sciences. In J. P. Tejedor (Ed.), *Bayesian Inference*. IntechOpen.
- Paluck, E. (2025). Field experiments. In D. T. Gilbert, S. T. Fiske, E. J. Finkel, & W. B. Mendes (Eds.), *The Handbook of Social Psychology* (6th ed.). HSP Press.
- Payne, B. K., & Correll, J. (2020). Race, weapons, and the perception of threat. In *Advances in Experimental Social Psychology* (Vol. 62, pp. 1-50). Academic Press. <https://doi.org/10.1016/bs.aesp.2020.04.001>
- Pennebaker, J. W., & Chung, C. K. (2013). Counting little words in big data. In J. P. Forgas, O. Vincze & J. Laszlo, *Social Cognition and Communication*, pp. 25-42. Psychology Press.
- Poldrack, R. A. (2006). Can cognitive processes be inferred from neuroimaging data?. *Trends in Cognitive Sciences*, 10(2), 59-63. <https://doi.org/10.1016/j.tics.2005.12.004>
- Pronin, E., Lin, D. Y., & Ross, L. (2002). The bias blind spot: Perceptions of bias in self versus others. *Personality and Social Psychology Bulletin*, 28(3), 369-381. <https://doi.org/10.1177/0146167202286008>
- Raihani, N. (2021). *The social instinct: How cooperation shaped the world*. Random House.
- Rankin, R. E., & Campbell, D. T. (1955). Galvanic skin response to Negro and white experimenters. *The Journal of Abnormal and Social Psychology*, 51(1), 30-33. <https://doi.org/10.1037/h0041539>
- Rosenthal, R. (1979). The file drawer problem and tolerance for null results. *Psychological Bulletin*, 86, 638 - 641. <https://doi.org/10.1037/0033-2909.86.3.638>
- Rosenthal, R., & Lawson, R. (1964). A longitudinal study of the effects of experimenter bias on the operant learning of laboratory rats. *Journal of Psychiatric Research*, 2(2), 61-72. [https://doi.org/10.1016/0022-3956\(64\)90003-2](https://doi.org/10.1016/0022-3956(64)90003-2)

- Ryan, L. & Golden, A., (2006). 'Tick the box please': A reflexive approach to doing quantitative social research. *Sociology*, 40(6), 1191-1200. <https://doi.org/10.1177/0038038506072287>
- Sakaluk, J. K. (2016). Exploring small, confirming big: An alternative system to the new statistics for advancing cumulative and replicable psychological research. *Journal of Experimental Social Psychology*, 66, 47-54. <https://doi.org/10.1016/j.jesp.2015.09.013>
- Schreiber, D. (2017). Neuropolitics: Twenty years later. *Politics and the Life Sciences*, 36(2), 114-131. <https://doi.org/10.1017/pls.2017.25>
- Scurich, N. (2020). Introduction to this special issue: Underreporting of sexual abuse. *Behavioral Sciences & the Law*, 38(6), 537-656. <https://doi.org/10.1002/bsl.2491>.
- Shambare, R. (2014). The adoption of WhatsApp: breaking the vicious cycle of technological poverty in South Africa. *Journal of Economics and Behavioral Studies*, 6(7), 542-550. <https://doi.org/10.22610/jebbs.v6i7.515>
- Shen, F. X. (2010). The law and neuroscience bibliography: Navigating the emerging field of neurolaw. *International Journal of Legal Information*, 38(3), 352-399. <https://doi.org/10.1017/S0731126500005916>
- Shepela, S. T. & Levesque, L. L. (1998). Poisoned waters: Sexual harassment and the college climate. *Sex Roles*, 38(7-8), 589-611. <https://doi.org/10.1023/A:1018791126393>
- Sigall, H., Aronson, E., & Van Hoose, T. (1970). The cooperative subject: Myth or reality?. *Journal of Experimental Social Psychology*, 6(1), 1-10. [https://doi.org/10.1016/0022-1031\(70\)90072-7](https://doi.org/10.1016/0022-1031(70)90072-7)
- Silberzahn, R., Uhlmann, E. L., Martin, D. P., Anselmi, P., Aust, F., Awtrey, E., ... & Nosek, B. A. (2018). Many analysts, one data set: Making transparent how variations in analytic choices affect results. *Advances in Methods and Practices in Psychological Science*, 1(3), 337-356. <https://doi.org/10.1177/2515245917747646>
- Silver, E., Goff, K., & Iceland, J. (2022). Social order and social justice: Moral intuitions, systemic racism beliefs, and Americans' divergent attitudes toward Black Lives Matter and police. *Criminology*, 60(2), 342-369. <https://doi.org/10.1111/1745-9125.12303>
- Simmons, J. P., Nelson, L. D., & Simonsohn, U. (2011). False-positive psychology: Undisclosed flexibility in data collection and analysis allows presenting anything as significant. *Psychological Science*, 22(11), 1359-1366. <https://doi.org/10.1177/0956797611417632>
- Simonsohn, U., Nelson, L. D., & Simmons, J. P. (2014). P-curve: A key to the file-drawer. *Journal of Experimental Psychology: General*, 143(2), 534-547. <https://doi.org/10.1037/a0033242>
- Skitka, L. J., & Sargis, E. G. (2005). Social psychological research and the Internet: The promise and peril of a new methodological frontier. In Y. Amichai-Hamburger, *The Social Net: Understanding Human Behavior in Cyberspace*, pp. 1-26. Oxford University Press.
- Sloman S. (1996). The empirical case for two systems of judgment. *Psychological Bulletin*, 119, 3-22. <https://doi.org/10.1037/0033-2909.119.1.3>

- Stainton-Rogers, W. (2019). *Perspectives on social psychology: A psychology of human being*. Routledge.
- Stapel, D. (2014). Faking science: A true story of academic fraud. In S. T. Siegel & M. Daumiller (Eds.). *Wissenschaft und warheit: Ursachen, folgen und prevention wissenschaftlichen fehlverhaltens*. Barbara Budrich Publishing.
- Steele, C. M. (1997). A threat in the air: How stereotypes shape intellectual identity and performance. *American Psychologist*, 52(6), 613–629. <https://doi.org/10.1037/0003-066X.52.6.613>
- Stork, C., Calandro, E. & Gillwald, A. (2013). Internet going mobile: internet access and use in 11 African countries. *Info*, 15(5), 34-51. <https://doi.org/10.1108/info-05-2013-0026>
- Surridge, P. (2016). Education and liberalism: Pursuing the link. *Oxford Review of Education*, 42(2), 146-164. <https://doi.org/10.1080/03054985.2016.1151408>
- Syed, M. (2021). It's 2 x 2 designs all the way down: Social psychology's over-reliance on experiments needlessly restricts diversity in the field. <https://doi.org/10.31234/osf.io/u89e2>
- Thomas-Slayter, B. P. (2003). *Southern Exposure: International Development and the Global South in the Twenty-First Century*. Kumarian Press.
- Thorson, K. R., Mendes, W. B., & West, T. V. (2020). Controlling the uncontrolled: Are there incidental experimenter effects on physiologic responding?. *Psychophysiology*, 57(3), e13500. <https://doi.org/10.1111/psyp.13500>
- Tice, D. M., Butler, J. L., Muraven, M. B., & Stillwell, A. M. (1995). When modesty prevails: Differential favorability of self-presentation to friends and strangers. *Journal of Personality and Social Psychology*, 69(6), 1120–1138. <https://doi.org/10.1037/0022-3514.69.6.1120>
- Tomasello, M. (2019). *Becoming Human: A Theory of Ontogeny*. Cambridge, MA: The Belknap Press of Harvard University Press.
- Van Bavel, J. J., Baicker, K., Boggio, P. S., Capraro, V., Cichocka, A., Cikara, M., ... & Willer, R. (2020). Using social and behavioral science to support COVID-19 pandemic response. *Nature Human Behavior*, 4(5), 460-471. <https://doi.org/10.1038/s41562-020-0884-z>
- Vogel, G. (2011). Psychologist accused of fraud on 'astonishing scale'. *Science*, 334(6056), 570. <https://doi.org/10.1126/science.334.6056.57>
- Vul, E., Harris, C., Winkielman, P., & Pashler, H. (2009). Puzzlingly High Correlations in fMRI Studies of Emotion, Personality, and Social Cognition. *Perspectives on Psychological Science*, 4(3), 274-290. <https://doi.org/10.1111/j.1745-6924.2009.01125.x>
- Wapman, K.H., Zhang, S., Clauset, A., & Larremore, D. B. (2022). Quantifying hierarchy and dynamics in US faculty hiring and retention. *Nature*, 610, 120-127. <https://doi.org/10.1038/s41586-022-05222-x>



Weisberg, D. S., Keil, F. C., Goodstein, J., Rawson, E., & Gray, J. R. (2008). The seductive allure of neuroscience explanations. *Journal of Cognitive Neuroscience*, 20(3), 470-477.  
<https://doi.org/10.1162/jocn.2008.20040>

Wittgenstein, L. (1953). *Philosophical Investigations*.

Zhang, S., Heck, P. R., Meyer, M. N., Chabris, C. F., Goldstein, D. G., & Hofman, J. M. (2023). An illusion of predictability in scientific results: Even experts confuse inferential uncertainty and outcome variability. *Proceedings of the National Academy of Sciences*, 120(33), e2302491120.  
<https://doi.org/10.1073/pnas.2302491120>

Zimbardo, P. G. (1973). On the ethics of intervention in human psychological research: With special reference to the Stanford prison experiment. *Cognition*, 2(2), 243-256.  
[https://psycnet.apa.org/doi/10.1016/0010-0277\(72\)90014-5](https://psycnet.apa.org/doi/10.1016/0010-0277(72)90014-5)

## ENDNOTES

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