WHERE ARE ALL THE INTROVERTS HIDING?

AN ANALYSIS OF INTROVERSION IN RESEARCH

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Abstract

Since their origin, extraversion and introversion have become staples in both research terminology and colloquial language. In 2012, Susan Cain released a New York Times Best-Seller, Quiet: The Power of Introverts in a World That Can't Stop Talking, which discussed the role of introverts in a society that values extraversion. This paper analyzes the Five-Factor Model as well as case studies of various articles displaying bias against introversion. These articles are used to discuss how the bias against introversion has become part of psychological research and the need to reverse trends of stereotyping and misinformation. Other articles are also discussed, which present a more well-rounded presentation of introversion and extraversion.

In 1921, Carl Jung first used the terms "extraversion" and "introversion" to describe psychological types of personality. Since their origin, these terms have become staples in both research terminology and colloquial language. Extraversion is part of the Five-Factor personality model (McCrae & John, 1992) and internet media companies create online quizzes for entertainment, some based on the pretense of identifying the degree of introversion or extraversion based on favorite foods or colors (e.g., Buzzfeed, PopSugar). Introversion and extraversion have often been presented as a dichotomy rather than existing on a spectrum. As a result, in some research and media reports introversion is portrayed as a failure to achieve the desirable trait of extraversion or as a lesser option. However, despite this, interest in introversion, and the desire for fair representation of introverts, has become popularized relatively recently.

Susan Cain wrote Quiet: The Power of Introverts in a World That Can't Stop Talking in 2012 and it quickly garnered popularity as it rose to the top of the New York Times' Best Seller list. Introverts around the world flocked to the book for its theme of celebrating introverted qualities in a world where extraversion has become the expected ideal. Cain (2012) establishes the thesis at hand: anywhere between one-third to one-half of the world's population are introverts, yet research is primarily skewed towards extroversion in both abundance and content. The popularity of Cain's book suggests that not only are there a large number of introverts out in the world, but also that many of them identify with themes of feeling undervalued, misunderstood, or as a weak link in a culture where extraversion is celebrated. Six years following the publication of Cain's bestseller, the culture of extraversion as the ideal is still prevalent in society. Though this is a problem in culture and research, the role of bias against introverts in the field of research remains largely unexamined. This paper will explore how cultural bias may have influenced the research field, while arguing for more comprehensive and neutral research through the use of unbiased language, critical literature reviews, and unbiased research agendas.

Defining Extraversion and Introversion

Since bias against introversion is closely tied to the cultural expectations of western society, it is essential to consider the usage of the terms "introversion" and "extraversion" as they have developed over time. Extraversion, as Carl Jung (1921) described it, is an outward turning of libido or a transfer of energy from an individual, out into an "object". On the other hand, introversion is "a mechanism in which the libido concentrates itself wholly on the complexes, and seeks to detach and isolate the personality from external reality" (Jung, 1921, p. 501). Though libido is often used today to describe one's sexual drive, in the sense that Jung used the term it is also inclusive of one's innate instinct or drive.

Jung states that extraverts outwardly express their energy, whereas introverts spend more energy internally (1921). This definition is not far off from how the general populous define introversion and extraversion today. Cain (2012) emphasizes that the main differences between introverts and extraverts are how they mentally process their surroundings, how they prefer to interact with those around them, and how their energy levels are either depleted or restored. Both the exertion and storing of energy appears to be a common theme in the differentiation between extraverts and introverts despite misconceptions that the difference centers on being shy or outgoing.

The Five-Factor Model Presentation of Introversion

The Five-Factor Model of personality is commonly used to assess what are touted as core aspects of personality: conscientiousness, agreeableness, neuroticism, openness, and extraversion (Costa & McCrae, 2009). This model has been and continues to be used by many researchers and through its structure automatically sets up extraversion as the standard. Only people who score as having a "lack" of extraversion then qualify as introverts. In the Five Factor Model, an individual could rank high or low on agreeableness, extraversion, openness, etc. (Costa & McCrae, 2009). In this way, the model primes readers to interpret lower levels of extraversion as a lacking of the positive quality of extraversion, as they would also assume that someone with low levels of agreeableness is disagreeable

and someone with low levels of openness is closed off. This trend to recognize introversion as the absence of the valued trait of extraversion (when it is recognized at all; often it is overlooked completely) has permeated personality research to this day.

The usage of terminology related to introversion and extraversion frequently lacks generalizability and furthers cultural stereotypes. McCrae and John (1992) sought to better understand popular conceptions of personality traits by comparing how people sorted different adjectives into categories based on the Five Factor Model of personality. Regardless of the method, conceptions of extraversion seemed relatively consistent, including overlapping descriptors such as "talkative." Interestingly, the categorizing sometimes appeared to accurately describe extraversion, such as "energetic," "gregarious," or "excitement-seeking," but others may be more open to interpretation and debate and would seem to depend on the context, such as "talkative" or "skilled in play, humor." For example, if an introvert is given the opportunity to speak about a subject that they are extremely passionate about in the right kind of setting, they may be very talkative. Furthermore, humor is particularly subjective. While an extravert may work a room and get a barrel of laughs, an introvert may have subtle, quiet, or quick-witted humor. If subjective topics such as, humor were considered from the perspective of introverts in an empirical or research setting, there might be evidence to support claims that introverts possess qualities such as humor or being talkative. At the present time, these areas remain unexplored, further emphasizing the need to fill gaps in the literature toward a more well-rounded perspective.

Furthermore, though many present extraversion and introversion as opposites, they exist on a spectrum. For example, in the Five-Factor model, one could score somewhere in the middle of the spectrum (Costa & McCrae, 2009). People who fall in between introversion and extraversion are most often labeled as "ambiverts" (Cain, 2012). However, regardless of how far to one side of the spectrum a person may fall, individuals can express qualities that are in opposition to their typical behavior. Cain (2012) calls this the "rubber-band theory" wherein people can "stretch" themselves to behave in a way that best suits the current situation, but that following the need to stretch, they return to their resting potential. Many studies fail to take the rubber-band theory into consideration, rather they imply that introverts should act more like extraverts for long periods of time, if not always.

The Current State of Personality Research: What is Research Saying, or Not Saying, About Introversion?

A commonly used search engine for peer-reviewed full-text articles in psychology is the American Psychological Association's database, PsycNet. This database gives users the opportunity to do general searches, such as by topic, as well as more specific searches of author or title. To date, when one searches "extraversion" as a general search in PsycNet, the program finds 10,540 results. "Introversion" as a search term, on the other hand, only brings up 3,359 results. In more specific searches requiring "extraversion" and "introversion" in journal article titles, the results come back as 1,167 extraversion titles and 357 introversion titles.

Therefore, in this particular database, representation of introversion in research is slightly less than one-third that of extroversion. Although this is only a single database, it is commonly used in educational and research settings when searching for research articles. The popularity and availability of this database means that these articles are easily and frequently accessible to the future generation of researchers, professors, and psychologists. Research on extraversion, at least what has been published, is more accessible and numerous. The relative numbers alone are discouraging to a researcher hoping for parity and equal representation between the constructs. Additionally, the content of some of the articles themselves make the research appear particularly problematic.

Research Article Titles Reflect Prevailing Attitudes

The titles of many research articles reflect the culturally-influenced desire for introverts to behave in more extraverted ways. For example, Zelenski, Santoro, and Whelan (2012) published a study entitled "Would Introverts Be Better Off if They Acted More Like Extraverts? Exploring Emotional and Cognitive Consequences of Counterdispositional Behavior." Similarly-titled articles include, "The Failure of Introverts to Emerge as Leaders: The Role of Forecasted Affect" by Sparks, Stanmore, and O'Connor (2018) and "Why Extraverts are Happier Than Introverts: The Role of Mood Regulation" by Lischetzke and Eid (2006).

Below we will examine the content of these articles, but for the present it is important to note how they offer a negative perspective of introversion. Their titles and premises are grounded in the extravert ideal and ignores the other side of the coin: there are many positive qualities introverts have that benefit themselves, and that may benefit extroverts. For instance, introverts tend to take longer to process information and therefore spend a lot of time thinking before speaking, whereas extraverts are more likely to act first and process later. While taking the risk to speak first, extraverts may receive benefits, yet they also run the risk of misspeaking, making bigger mistakes, or talking over quality ideas from others (Cain, 2012). If one of the goals of psychological research is to help make people's lives better, then it is important to see what is working well from both sides of the spectrum.

Literature Reviews and Hypothesis Formation

As is the standard for research articles, the literature review sections directly inform the hypothesis and what the study will be evaluating. In this step of the research process a problematic theme begins to emerge. Before research is undertaken, it is standard practice

to conduct a literature review first, in order to determine what others have done and what they found. Many authors use the literature reviews as a way to set the stage for their current hypotheses.

Lischetzke & Eid, 2006; Zelenski et al., 2012; Sparks, Stanmore & O'Connor, 2018). In many ways, this approach is beneficial, as it prevents researchers from unnecessarily repeating the same study and allows researchers to find gaps in the literature that need to be filled. However, it also sets researchers up to incorporate old biases and findings into their new hypotheses and methods. The uninformed or biased information within the literature from the past acts as a reference point to begin a study, can influence the development of new hypotheses, and can lead to confirmation bias later in the process.

Sparks et al. (2018) cite research regarding the prevalence of extraverts as emergent leaders, which they define as individuals who take on leadership roles when a situation presents without a formal leader present. As with the prior studies, the previous literature becomes the basis for their study, as there was no new theory for why introverts do not become emergent leaders. As new research continues to cite older literature, a self-perpetuating cycle occurs which continues to promote misconceptions and stereotypes about introversion first introduced into the literature long ago and unquestioningly repeated by more recent research. For example, Sparks et al. (2018) references a Zelenski et al. study (2013) as part of their literature review. Zelenski et al. (2012, 2013) present introversion as a negative and undesirable personality trait, often with relatively little empirical support for their negative assertions, and when these articles are referenced by researchers, like Sparks et al. (2018), the cycle continues.

Do extraverts have more positive emotions because the conditions in the lab are unintentionally biased in their favor? Is it because introverts have internalized cultural messages that they cannot be as happy as extraverts or that there is no room for them to become leaders? Are there third variables at play? In a society where extraversion is the norm, many introverts are used to performing the role of extravert to fit in with expectations. One common phenomenon in social psychology is stereotype threat, whereby members of a stereotyped group are conscious of the stereotypes about them and unconsciously behave in ways consistent with the stereotypes. For example, if women are asked to check a box indicating their gender before a math test, their math performance is lower than if they had not been asked to check the gender box (Rydell, Rydell, & Boucher, 2010). It seems likely that introverts might succumb to stereotype threat.

Research Design

If researchers do not consider their initial assumptions, the way research design and lab set-up may be involved, and the influence of broader cultural factors such as stereotype threat, in more broadly examining the qualitative meanings behind their results, then research studies are falling short of their full potential. While numbers and figures may support a certain hypothesis, there are often cultural explanations that could explain the results from a different perspective. In this way, psychological research would benefit from more anthropological or sociological perspectives, which examine the creation and development of societal and cultural structures and turns this same lens onto the assumptions and values underlying psychological inquiry. For results to be truly generalizable outside of the lab, they must take into consideration the context of cultural demands and expectations.

An example of a long-held belief that continues to be perpetuated is the commonly stated theory that extraverts are happier than introverts because trait-introverts lack the same levels of positive emotion as trait-extraverts (Zelenski et al., 2012). While such studies may have quality methods that produce reliable results, the factors are frequently examined only within the context of the laboratory and with an eye to confirming these long-held beliefs. This confirmation bias appears to be human nature in that it is common within both the research field and in a society wherein people tend to search for evidence to confirm initial beliefs rather than to disconfirm. Zelenski et al. (2012) recognize the lack of generalizability that comes with doing laboratory work, but they do not look at the factors influencing their hypotheses, as well as the potential emotion of introverts, as a cultural issue.

Hypothesis formation, literature review, and experimental design, interpretation of data, and study limitations can all be negatively impacted by unquestioned and unexplored negative assumptions about introverts. For example, Lischetzke and Eid (2006) describe a study of introverts and extraverts watching an emotionally ambiguous film and then examining to what extent extraverts versus introverts were able to maintain positive emotions. They report that extraverts were more successful than introverts at maintaining a positive mood and indicate briefly that the ability to do so benefits extraverts in their daily lives and explains why they are "happier" than introverts. Lischetzke and Eid (2006) state in their limitations section that they did not measure what types of methods the extraverts and introverts were using to maintain positive emotions.

There remains no in-depth analysis of intrapersonal and interpersonal processes, and their costs and benefits, used by extraversts and introverts. For example, one of the methods that Lischetzke and Eid (2006) suggest extraverts may use for maintaining positive emotions is diverting attention from sad aspects of the film or a natural inclination to pay more attention to the positive aspects of the film. If these theories are true, then it could be argued that perhaps it is a failing of emotional intelligence on the part of extraverts not to take the whole range of emotional content into consideration when viewing the film. Taken more broadly, such findings could also suggest a moral failing of extraverts to be

appropriately concerned by negative situations. Theories such as these are heavily based in speculation and suggest the influence of the extravert ideal, in which outcomes are interpreted as adaptive and desirable without consideration of alternative explanations that such qualities may also include maladaptive or undesirable aspects. Without considering more balanced new theories, it will be difficult for the field to continue to advance and for future empirical studies to be designed to consider a broader viewpoint.

Operational Definitions: How Do We Talk About Introverts?

The pattern and flow of research moves from the literature reviews and hypothesis formation into the operational definitions researchers use when talking about introverts. There appears to be a misunderstanding about what the characteristics of an introvert include when describing them in a research setting. Zelenski et al. (2012) wanted extraverts to act like introverts, so they were instructed to be "reserved, quiet, lethargic, passive, compliant, and unadventurous" (p. 294). Operational definitions determine exactly how to interpret what a study means by the terms they are using. By defining introverts with negatively-valenced terms like "lethargic" and "passive," there is a dangerous reinforcement of stereotypes that already exist, despite their potential lack of accuracy.

Cultural biases inform not only our operational definitions of introversion but also the hypotheses that researchers test. For example, in a recent study, Spark, Stansmore, and O'Connor (2018) stated, "The objective of this study was to understand why introverts are less likely to emerge as leaders" (p. 88). Yet Susan Cain (2012) emphasizes that some of the most influential leaders we know such as Rosa Parks, Eleanor Roosevelt, Moses, Stephen Wozniak, and others were introverts. It is difficult to consider such a wide array of leaders from different backgrounds to all be the exception to the rule, suggesting that the initial premise about introverts failing to emerge as leaders may be oversimplified.

Stereotyping, though sometimes a useful heuristic, can also creep into the operational definitions used as the basis for a study. For example, Lischetzke and Eid (2006) state, "Extraverts desire to experience higher activated pleasant affect (e.g., enthusiasm, elation) and pleasant affect (e.g., happiness, cheerfulness) than introverts" (p. 1130). They do not offer a citation to support this assertion. While enthusiasm and elation may be accurate terms to use because introverts, especially as children, tend to have higher reactivity levels to external and internal stimuli (Kagan, Reznick, & Snidman, 1988), the idea that introverts do not desire "happiness" does not have a strong basis and the article fails to cite a study in connection with that statement."Happiness" is a difficult word to use because so many people define it differently, including introverts and extraverts. Because of the weight of such a word, it is important to stress once again the need for operational definitions to make it clear the exact context of the term.

Models of Balanced Treatment of Introversion and Extraversion

This paper has covered many ways cultural anti-introvert bias has impacted research. That is not to say that research that accurately and fairly portrays introversion and avoids negative stereotyping does not exist. Hendrick and Brown (1971) investigated interpersonal attractions between introverts and extraverts with the hypothesis that introverts would prefer those who are dissimilar from themselves, or extraverted. In forming their hypothesis, Hendrick and Brown (1971) were careful in stating that the results from a prior study that they were basing their hypothesis on, "suggests the normative desirability of extraversion as a social trait" (p. 31). By directly stating that extraversion is the norm, they give context as to why in another study they cite, that introverts describe an extraverted personality as their ideal as well as why they are predicting that introverts may be more drawn to extraversion. Further, in the discussion section of this paper, Hendrick and Brown (1971) explain their results in the context of social stereotyping. They found that introverts tended to prefer extraverts in short-term scenarios like who would be interesting at a party or has the ideal personality, yet preferred other introverts for long-term commitments such as being a reliable friend or being honest and ethical. These results, as they explain, are reflective of the stereotypes of fun-loving, outgoing extraverts versus the more stable, conscientious introverts. Unfortunately, this research will soon be reaching an age of about 50 years, making it "outdated" by most research standards, yet it provides a much more realistic perception of the limits of research when there are deep stereotypes to combat.

More recently, von Gehlen and Sachse (2015)studied the influence of arousal on performance in the context of personality, specifically introversion and extroversion. Rather than presenting the study as a juxtaposition of which personality type is better at performing with excess stimulation, the authors remained relatively neutral in tone. von Gehlen and Sachse (2015) found that extraverts' work improved with cognitive arousal and that the arousal did not seem to impair introverts as expected. Though this study had limitations, the article's language sets it apart from others discussed in this paper. The expectation that introverts would perform worse with cognitive arousal was based on physiological studies rather than stereotyped expectations. Furthermore, when the results suggested that cognitive arousal did not negatively affect introverts' performance, von Gehlen and Sachse looked at third variables that may have influenced their results, emphasizing the point that studies like these are rarely as straightforward as they are often presented.

Future Directions

While this paper has presented some shortcomings existing in the field of research, it would be remiss not to express the potential for better future outcomes. Attention-grabbing titles may get an article noticed, but it should not be at the expense of the identity of participants. Researchers and peer reviewers have the opportunity to demand neutrally valenced terminology in regard to personality traits like introversion in the same way that the field has made a move from referring to "schizophrenics" to "people with schizophrenia." Higher standards have the potential to lead to better results.

Further psychology research, specifically in partnership with fields such as linguistics or anthropology, could examine the use of biased language and cultural influence to determine what criteria would be best for reviewers to target when reading journal submissions. If guidelines could be created, they could become as common place as "people with schizophrenia," which would therefore eliminate much of the flaws seen in otherwise useful studies. If peer-reviewed articles can be published while supporting outdated stereotypes, then it lowers the expectation for accurately reporting introversion or other misunderstood concepts. However, if done correctly, the quality of work being produced will be much higher and the knowledge generated may provide a more nuanced picture of personality traits.

Furthermore, as Susan Cain's (2012) book has shown, introverts across the world are looking for better representation. By taking responsibility in the research field to begin that movement could be influential for future generations. It is not enough to simply make research on extraverts more fair for introverts, personality psychologists can push for more research on introversion as its own trait. Introverted students should be able to find research that does not suggest that they are constantly lacking in extraverted qualities, especially since many introverts experience cultural messages that they are not as good as extraverts from before they enter school all the way through their academic careers. For any research, it is essential that potential biases be addressed from the beginning of a literature search or hypothesis formation all the way through to the writing of the discussion section.

Conclusion

Susan Cain (2012) started a public conversation about representation of introverts because of her desire for introverts like herself to be seen, heard, and valued. Six years later, however, the research in personality psychology appears slow to chance. As seen in this paper, potential sources of bias against introverts appear throughout the research process; in research article titles, literature reviews, hypotheses, research design, etc. Authors who are contributing to the study on introversion in a positive manner should be looked to as examples for others, but combatting this problem is likely to be a long-term process including intentional steps by authors and editors to increase standards to reduce bias and reduce reliance on outdated misconceptions and stereotypes.

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