

Positive Psychology as a Scientific Movement

Jonathan Simmons, University of Alberta, Canada

Abstract: Psychology has always been vulnerable to fads, producing its share of psychological movements and therapeutic cults that blur the borderline between science and non-science. It is important for sociologists and other scholars who study the social life of scientists and intellectuals to engage with the content of ideas and to take conflicts about scientific legitimacy seriously. This research examines a debate regarding scientific legitimacy in a qualitative case study informed by Frickel and Gross's general theory of scientific/intellectual movements. The focus will be positive psychology's emergence at the end of the last decade and its failure to persuade the wider psychology community of its necessity due to its use of aggressive framing strategies. Understanding how positive psychology works to establish itself as value-free, objective science, while desiring to be perceived as relevant to the public contributes to discussions about framing and boundaries in science.

Keywords: Science, Knowledge, Controversy

Introduction

In his forward to the Oxford Handbook of Positive Psychology, psychologist Christopher Peterson argues “[p]ositive psychology is psychology—psychology is science—and science requires checking theories against evidence.... Positive psychology will rise or fall on the science on which it is based” (Snyder and Lopez 2009, xxiii). Early on in positive psychology's development, psychologists wondered if it would end up being yet another fad, and as it matured as a movement, strong reactions about its credibility moved beyond academic journals and other pseudo-private arenas, attracting the attention of columnists and essayists like Barbara Ehrenreich (2010), who see positive psychology as the shade under which self-help entrepreneurs can rest because they no longer need to rely on gods and mysticism for their emphasis on the relationship between positive thoughts and positive results; they can “fall back on that touchstone phrase of rational, secular discourse—’studies show ...’” (148).

Positive psychology's founder, Martin Seligman, initially defined positive psychology in 1998 as a new field concerned with positive experiences such as well-being, optimism, and flow. In his most recent book, *Flourish: A Visionary New Understanding of Happiness and Well-Being*, Seligman (2011) describes positive psychology as a scientific and professional movement with a new goal to build the enabling conditions of a life worth living. Critics' concerns about positive psychology follows from its emphasis on social change, its role in guiding organizational policy, and its relevance to research and public policy initiatives tied to happiness discourses. Understanding how positive psychology works to establish itself as value-free, objective science, while desiring to be perceived as relevant to the public, is important for policy-makers, but it also makes contributions to social movement literature concerning framing and boundaries in science. In this paper I conceptualize positive psychology as a “scientific/intellectual movement” (SIM), drawing from Frickel and Gross's (2005) general theory which defines SIMs as “collective efforts to pursue research programs or projects for thought in the face of resistance from others in the scientific or intellectual community” (206). I focus on how proponents of positive psychology engage in boundary-work to demonstrate their movement's legitimacy and the challenges they face because of their framing strategies. I argue that positive psychology's leaders and proponents have failed to persuade the wider psychology community of the necessity of a positive psychology movement due to their use of aggressive framing strategies.

Positive Psychology as a Scientific Movement

Like the dominant contentious politics approaches used in social movement scholarship (McAdam, Tarrow, and Tilly 2001), studies of scientific movements have been preoccupied with organized collective action and resource mobilization. While movements may be described as ideologically structured action, it is important not to bury the role that scientists play in nurturing movement identity. Frickel and Gross's general theory provides avenues for examining the importance of collective identity to movements and the complex motivations that scientists have for competing for meaning in emerging fields.

SIMs are similar to social movements, but they have six distinct features, the first of which is that they are implemented within a particular realm, the intellectual community or academia, where unlike other kinds of social movements, knowledge production is the primary goal. Second, SIMs must challenge the dominant approaches of a given field, even if movement ideas later become normative. Initially at least, they should be contentious, which leads to the third element: SIMs are political, but not in the activist sense that we associate with political process theories of social change. Frickel and Gross (2005) instead refer to the "distribution, maintenance, or transfer of power" (207) in fields with limited and unequally distributed resources. The political nature of a SIM is constituted through organized collective action, unlike, say, more individualistic lifestyle movements (Haenfler, Johnson, and Jones 2012). This fourth element is important because it forces researchers to look beyond the influence of an individual leader. Frickel and Gross (2005) do not dismiss the actions of charismatic founders, but leaders' choices must be connected to the social dynamics of the movement. The fifth element contends that like political process movements, SIMs are episodic, in that they either transform into a more stable institutionalized form or they disappear. Finally, SIMs can vary in aim and scope, i.e., they may emphasize the importance of previously neglected methods, introduce new theories, or even blur the boundary between science and non-science (208).

Along with the six elements that define a SIM, Frickel and Gross discuss four propositions regarding the opportunities for SIM emergence. The first proposition is that a movement's emergence is largely driven by established scholars who are dissatisfied with the prevailing practices of their field. Seligman is one such scholar. He is the thirteenth most frequently cited psychologist in introductory psychology textbooks (Haggbloom et al. 2002) and he built a successful career out of studying depression following his early work with learned helplessness.¹ As Seligman began to consider alternatives to repairing mental illness and the possibilities of prevention, which he metaphorically describes as psychological immunization, he became increasingly dissatisfied with mainstream psychology's focus on pathology.

The second, third and fourth propositions address what is necessary for a successful SIM, such as opportunity structures, access to resources, micromobilization contexts, and the importance of framing to inspire and guide collective action. It is not possible to say whether positive psychology has been successful as a movement because it is ongoing and remains in tension with mainstream psychology. Even though SIMs exist for finite periods, episodes can last as long as two decades, if not longer (Frickel and Gross 2005, 208). Since positive psychology has neither succeeded nor failed, I will focus on how it has been received by psychologists outside the movement.

SIMs depend on opportunity structures and access to resources, including access to employment, strategies for securing intellectual prestige, and mobilizing structures. Seligman (2011) reveals that when he was president-elect of the APA in 1997 he received a mysterious e-mail requesting a meeting, the only clue being the author's initials "PT." After developing a relationship with two-lawyers representing an anonymous organization, Seligman was handed a

¹ Learned helplessness occurs when an animal comes to believe that their actions will have no power to change the conditions in a given situation.

cheque for \$1.5 million dollars to pursue his positive psychology research. The mysterious foundation funding his work later took the name Atlantic Philanthropies, tasked by the billionaire Charles Feeney to do good works. Perhaps caffeinated by this early donation, Seligman secured \$30 million U.S. dollars by 2003 from nonprofit organizations, and positive psychology eventually became self-supporting. Now, almost 15 years later, positive psychology has amassed many of the trappings of a mature science. The International Positive Psychology Association (IPPA) facilitates communication and collaboration among researchers and practitioners around the world who are interested in positive psychology, boasting 3,000 members from over 70 countries. Membership benefits include free quarterly calls with leading positive psychologists, reduced registration for World Congress, and access to two journals: *Applied Psychology: International Review* and *Psychology: Health and Well-Being*. Positive psychology is also credited with numerous books, journal special issues, conferences, meetings, centers, courses, and interventions. It has its own journal, the *Journal of Positive psychology*, and proponents of positive psychology have a variety of avenues for community building: undergraduate positive psychology courses remain extremely popular, there are several Ph.D. and M.A. concentrations in positive psychology, and numerous conferences for early scholars to engage in sustained contact with one another (Linley et al. 2007).

Frickel and Gross (2005) extend these micromobilization contexts into the realm of collective identity. Social movements, according to the authors, are “generated from, and ultimately sustained by, ideas” (221). The success of a SIM depends a great deal on inspiring collective action through boundary-work and framing. Frames are “sets of ideas purposefully articulated to lend specific meaning and urgency to actors' individual and social experiences” (221) which operate along four related dimensions: (1) intellectual identity or self-concept and associated social categories; (2) the movement's defining ideas; 3) the construction of historical narratives often for the purpose of developing a cohesive ideology; and 4) the movement's positioning with respect to competitor movements (Abbott 1999). All four of these dimensions involve rhetorical moves to support a SIM's legitimacy through persuasion, differentiation, and opposition.

Seligman's Firewall: Positive and Negative Psychology in Context

Seligman was concerned from the beginning about how to present his new movement, both to insiders and outsiders, while remaining cognizant of the fact that some elements would necessarily have to be excluded. Rather than a frame, he preferred the metaphor of a firewall, identifying positive thinking literature as distinct from positive psychology and expressing his antipathy towards self-help gurus (Seligman, 1998). Along with resisting claims that positive psychology is nothing more than a shallow happiology with an optimistic bias, positive psychology's proponents have also used Seligman's firewall to promote a separatist message, contrasting positive psychology with mainstream (negative) psychology and past psychological research which covered similar ground.

In early publications, positive psychology is presented as both a Manhattan Project for the social sciences (Seligman, 1998) and a mere supplement to other research, the goal of which is to provide a balance to psychology within an explicitly scientific framework. Seligman and Csikszentmihalyi (2001, 89-90) argue “We are, unblushingly, scientists first. The work we seek to support and encourage must be nothing less than replicable, cumulative, and objective” and “If empirical research fails to confirm the usefulness of the positions we advance, we hope to have the resilience to admit defeat and bow out with good grace.” This is not, at first glance, a revolutionary message, but Seligman (1999, s165) establishes an enduring divide, claiming that mainstream psychology's attention to negative emotions is dangerous for a science, limiting and biasing psychology's theories. Furthermore, psychology's negative focus has contributed to a culture of blame and victimology which may breed anger and violence and contribute to a

pessimistic view of human nature. These early statements are part of a historical narrative that acts as a rallying cry for change, undermining mainstream psychology, while presenting positive psychology as calming salve for an open wound.

Positive Psychology's Separatist Message

Seligman is not the first psychologist to separate the field of psychology into positive and negative approaches. Maslow (1954) did the same over fifty years ago:

The science of psychology has been far more successful on the negative than on the positive side. It has revealed to us much about man's shortcomings, his illness, his sins, but little about his potentialities, his virtues, his achievable aspirations, or his full psychological height. It is as if psychology has voluntarily restricted itself to only half its rightful jurisdiction, and that, the darker, meaner half (354).

It is no coincidence that Maslow is the source of the phrase "positive psychology," which is drawn from a chapter heading in his book *Motivation and Personality*. Admitting the relationship, Seligman nonetheless makes a distinction:

What distinguishes positive psychology from the humanistic psychology of the 1960s and 1970s and from the positive thinking movement is its reliance on empirical research to understand people and the lives they lead. Humanists were often skeptical about the scientific method and what it could yield and yet were unable to offer an alternative other than the insight that people were good (Peterson and Seligman 2004, 4).

Rather than limiting the scope of his new network to positive psychology, Seligman hoped to forge a positive social science with interdisciplinary collaborations based on his familiarity with both successful and failed scientific movements. He did not create new boundaries to promote his new science, instead reshaping already existing boundaries. Humanistic psychology operated in opposition to the orthodox conception of science at the time, which Maslow saw as mechanistic and ahuman. He wanted a discipline that could rediscover human needs and aspirations, emphasizing a positive view of human nature with an individualistic perspective regarding personal happiness and growth as opposed to more communitarian aspirations.

Like positive psychology, humanistic psychology attached itself to a longstanding scientific and philosophical tradition. Humanistic psychology also marketed itself as a change in focus or orientation. Admittedly, humanistic psychology rebelled against the quantitative methods now embraced by positive psychologists, but the responses of critics are comparable: humanistic psychology and positive psychology have both been accused of making naive assumptions about human nature and for failing to address conceptual ambiguities. Critics point to the difficulty in operationalizing their terms and ideas, leading to concerns about testability. Movement reactions to these criticisms are also similar: Carl Rogers, like Seligman, considered real science to be objective, exact, and rigorous, and he valorized the experimental method when faced with objections from his contemporaries (Elkins 2009; Kristjánsson 2010; Martin 2007).

In keeping with the contemporary expectations of mainstream psychology, Seligman intended for positive psychology to be more empirical, less political, and less narcissistic than previous attempts to study the same subject matter. For movement proponents, science means being descriptive rather than prescriptive, i.e., avoiding normative content. This coupling of value-neutrality with science for the public good is a "historically resonant" discourse (Kinchy and Kleinman 2003), in that it is taken-for-granted and serves as a patterned strategy for achieving legitimacy. Positive psychology's legitimacy hinges on maintaining a balance between these two discourses, but this effort is complicated by Seligman's firewall and his movement's dominant separatist message (Held 2004). Even when proponents effectively frame a SIM in

concert with historically resonant discourses, maintaining legitimacy may be destabilized by how proponents differentiate their SIM from competing intellectual positions (Frickel and Gross 2005, 224).

Not long after positive psychology's emergence, the late Richard Lazarus (2003) argued that the movement was in "danger of being just another one of the many fads that come and go" in psychology, and "which usually disappear in time, sometimes to return again in another form because the issues addressed are important but unresolved" (93). Lazarus is particularly concerned about positive psychology's marketing to fellow psychologists, which suggests that researchers should abandon their negative research and focus instead on "positive human qualities" (105). Even if this is not the intention of movement participants, he contends that collapsing "several discrete emotions into two broad categories and labeling them as positive and negative is unwise and regressive" (99). Positive psychology's leaders downplay the juxtaposition between positive and negative psychology:

Lazarus's juxtaposition is his own, and it is unfortunate; positive psychologists intend no disrespect to the many academics and practitioners who have spent the bulk of their careers investigating negative states (Seligman is one of them and is proud of the accomplishments of this field; contrary to Lazarus's invention, we have written no 'diatribes' against 'negative' psychology) (Seligman and Pawelski 2003, 159).

As we have seen, this juxtaposition remains an important part of the positive psychology movement's discursive practices. Despite Seligman's claim that positive psychologists have not criticized the dominant practices of his field, he nonetheless wonders why psychology has been so focused on the negative, offering one possible explanation:

Beginning with World War II and continuing through the cold war, American society became increasingly concerned with defense and damage. This is reflected in our media, children's books and in the topics studied by our social sciences. Local evening news shows exemplify this negative focus. Lead programs typically concern violence, arson, robberies, accidents and other atrocities. Stories of human kindness, courage and virtue are typically relegated to the end of the newscast, buried among dull items labeled 'human interest stories' (Gillham and Seligman 1999, s164).

Frickel and Gross (2005) argue that recruitment to a SIM is dependent on the "capacity of movement participants to depict themselves as caught up in some grand sweep of intellectual history" (223), but there are many different ways to construct historical narratives. Proponents of positive psychology do not just see themselves as being in a stream of scientific progress. Their movement is also polemical, which is consistent with the notion that the political aspects of a SIM tend towards exaggeration and promotion rather than cautious scientific or intellectual activity. In attempting to establish legitimacy, proponents make statements that are used to strategically develop and sustain the movement's identity.

Intellectual Identity and Psychology's Forgotten Promise

Proponents of positive psychology believe that critics misunderstand the movement, going so far as to describe a "widespread cultural and scientific myth" that mischaracterizes positive psychology as being divisive (Hart and Sasso 2011, 91). They have consequently attempted to massage their movement's relationship to mainstream psychology and competitor movements in such a way as to not seem threatening. Peterson and Park (2003) draw a line between the ideological movement and the science produced under the umbrella term positive psychology:

Perhaps the infrastructure—a steering committee, conferences, training institutes, special issues of journals, edited volumes, handbooks, a teaching task force, awards, seed grants, electronic mailing lists, and Web pages—strikes some as too elaborate and deliberate at this early stage in the field's development. Regardless, positive psychology should not be confused with its infrastructure (145).

Despite Peterson's plea for mainstream psychologists to focus on the science produced under the umbrella positive psychology, it is tempting to view positive psychology's boundary-work as nothing more than a tool for strategic mobilization. Csikszentmihalyi dismisses this emphasis on strategy as a conspiratorial account of positive psychology's success, describing its emergence as the rather unexpected result of an untapped demand for its ideas (Csikszentmihalyi 2003, 114), though he does express some reservations:

I would have preferred developing theory and research for a few more years before entering the public arena to defend positive psychology against the charges of Johnny-come-lateism that entrenched interests were sure to bring up against it. I know full well that new ideas can be killed just as soon by uncritical acceptance as by opposition (114).

Accounts of scientific and intellectual life have a tendency to view the formation of SIMs as being based on a power struggle for prestige. Collins (1975), for example, writes that a realistic image of science "would be an open plain with men scattered throughout it, shouting 'Listen to be! Listen to me!'" (480). Intellectuals, then, are preoccupied with internal discussions within small closed networks. When intellectuals look outside of these networks they are predisposed to look towards other small groups within the attention space. Serious talk between intellectuals is a concrete activity in which the sacred object "truth" arises. While the truth value of an idea may strengthen one side, the key element of intellectual life is competition involving domination through cultural capital and emotional energy.

Frickel and Gross differ from Collins, in that they do not see the quest for prestige and status to ever be the primary motivation for the creation of a SIM: "We agree with Bourdieu and Collins that opportunities for strategic gain may sometimes subconsciously give rise to intellectual dissatisfaction, but we do not see much theoretical or empirical warrant for the claim that SIM-catalyzing dissatisfaction arises only or primarily in response to opportunities" (211). Positive psychology's two sides, the "talk about the movement and talk about the subject matter of the movement's doctrine" (Katzko 2002: 674), are bound up with one another in a cultural space that serves as fertile ground for debates about intellectual motivation; however, motivation is rarely simple, and struggles over a SIM's legitimacy are intertwined with moral and political considerations (Frickel and Gross 2005; Fuchs 1992; Latour 1987; Shapin and Schaffer 1985).

While contentious historical narratives can serve as powerful tools of legitimation, it is important to recognize that boundary-work is not always or even mostly strategic (Knorr-Cetina 1981, 73), a fact which is often overlooked in talk about scientific practice. A more nuanced approach is available to sociologists. Intellectual identity, and inevitably motivation, consists of social categories that provide patterns intellectuals seek to cohere with, in that they are motivated to engage in research that feels consistent with their sense of the kind of intellectual they are (Frickel and Gross 2005, 222). Proponents of positive psychology take a variety of approaches to criticisms of their movement, but one consistent theme throughout their responses is positive psychology's promise and perspective. They identify themselves with a forgotten promise and of an era when psychology was concerned with more than just a single-topic such as mental illness.

Seligman differentiates his movement by emphasizing rebellion and synthesis. He wants to unite "scattered and disparate lines of theory and research about what makes life most worth living" (Seligman et al. 2005, 410), and positive psychology is meant as a supplement rather than a replacement for other research, the goal of which is to provide a balance to psychology within an explicitly scientific framework. Seligman's self-presentational strategies are inexorably linked

with his scientific concerns, which arose from what he refers to as the analytic-synthetic failure, positioning himself as a courageous rebel in "one faculty battle after another" (Morgeson et al. 1999, 108) trying to convince his colleagues that synthesis is a valid form of scientific activity. He describes himself as working at the border of the light and the penumbra of what is known, presumably why he identifies himself in opposition with the public, Congress, and the New England Journal of Medicine. He believes that the normative expectations of his field are too invested in reductionism, leaving him at a disadvantage in his department at the University of Pennsylvania, which he categorizes as "one of the three or four scientifically traditional, rigorous—constipated—of any department" he has come across (Morgeson et al. 1999, 107). He also tellingly refers to himself as the "left wing" of his department, reinforcing the necessity of challenging conservative tendencies within science to make advances.

Seligman's self-concept resonates with movement insiders, who also emphasize that they are housed in traditional psychology departments, and stifled by an intellectual culture that is resistant to change. Peterson and Park (2003), for example, accept that positive psychology does not have a monopoly on past or present research dealing with human goodness and excellence and that positive psychology is just an "umbrella term for what have been isolated lines of theory and research and to make the self-conscious argument that the good life deserves its own field of inquiry within psychology" (p. 144). However, they do see the academic skepticism of positive psychology (as opposed to the public embrace) as being informed by assumptions that human nature is flawed. In this respect, positive psychology should not be viewed as an ideological movement or a "secular religion" (p. 145), but instead as a unique scientific movement with the goals of "description and explanation as opposed to prescription" (p. 145). This focus on what constitutes good science links positive psychology to the intellectual self-concepts shared by movement proponents, but also with broader values and world-views (Frickel and Gross 2005, 222).

The effectiveness of a frame is based on more than how well it resonates with potential recruits, i.e., the "distribution of intellectual self-concepts is a function of other social processes both endogenous and exogenous to the intellectual field" (Frickel and Gross 2005, 213). The more in harmony self-concepts are with other, broader, social forces, the more likely they are to be seen as legitimate to potential recruits; however, the linking intellectual self-concepts to macro level changes can also cause problems for SIMs.

Discussion and Conclusions

This article set out to examine positive psychology as a scientific movement, focusing on its framing activities and the resulting debates about its scientific legitimacy. This research makes contributions to the sociology of ideas and scientific movement research by looking at how psychology's ambiguous scientific boundaries transform the role of boundary-work into a stylistic resource for ideologists. Positive psychology's framing, while successful in terms of recruiting, has failed to resonate with members of the wider psychology community. Its proponents are faced with a struggle to develop and acquire symbolic profit² in lieu of their movement's attachment to past positive psychologies and its treading of a "narrow line between the requirements of scientific or expert jargon, and popular discourse" (Yen 2010, 70). This is not to say that the popular face of positive psychology undermines its scientific research, but as Coyne and Tennen (2010) argue, it has been hampered as a movement by its sloganeering, separatist impulses, and close association with "self-help materials, personal coaching, and training programs to the lay public, industry, and the military" (36).

² A form of symbolic recognition such as wealth and authority.

Matthews and Zeidner (2003) see much of the work being done within positive psychology as important for the discipline of psychology as a whole, but they identify elements associated with what they see as a zeitgeist in American culture that emphasizes personal growth. They draw parallels between positive psychology and emotional intelligence, whose founder, Daniel Goleman, touched on many of the same topics as Seligman, and many of the criticisms of emotional intelligence anticipate criticisms of positive psychology, including “conceptual incoherence, neglect of measurement issues, and a tendency to make grandiose claims without supporting evidence” (138).

I have shown that the movement takes priority in arguments about positive psychology’s credibility because a scientific movement is held together by more than the knowledge it carries. The social glue acts as a selector, sacrificing more truthful representations of the external referents in favor of those that “facilitate the maintenance and continuity” of the movement (Kim 2009, 46). The resulting spectacle “resembles less a forum for discussion than it does that other great Roman institution” (Katzko 2002, 268) with the archetype of the scientist–explorer being replaced by the scientist–warrior who seeks to define and defend territory, emphasizing group formation over scientific pursuits and leading in some cases to social organizations that resemble religious orders or political parties in their ability to encourage devotion, even when the ship is sinking.

REFERENCES

- Abbott, A. 1999. *Department and Discipline: Chicago Sociology at One Hundred*. Chicago, IL: University of Chicago Press.
- Collins, R. 1975. *Conflict Sociology: Toward an Explanatory Science*. New York: Academic Press.
- Coyne, J., and H. Tennen. 2010. "Positive psychology in cancer care: a story line resistant to evidence." *Annals of Behavioral Medicine: A Publication of the Society of Behavioral Medicine* 39(1):35-42.
- Csikszentmihalyi, M. 2003. "Legs or wings? A reply to R. S. Lazarus." *Psychological Inquiry* 14(2):113-115.
- Ehrenreich, B. 2010. *Bright-Sided: How Positive Thinking is Undermining America*. New York: Picador.
- Elkins, D. 2009. "Why humanistic psychology lost its power and influence in American psychology." *Journal of Humanistic Psychology*. 49:267-291.
- Frickel, S., and N. Gross. 2005. A general theory of scientific/intellectual movements. *American Sociological Review*. 70(2):204-232.
- Fuchs, S. 1992. *The Professional Quest for Truth: A Social Theory of Science and Knowledge*. Albany: SUNY Press.
- Gillham, J., and M. Seligman. 1999. "Footsteps on the road to a positive psychology." *Behavior Research and Therapy*. 37(Suppl 1):S163-73.
- Haenfler, R., B. Johnson and E. Jones. 2012. "Lifestyle movements: Exploring the intersection of lifestyle and social movement." *Social Movement Studies*. 11(1):1-20.
- Haggbloom, S., and Warnick, Renee and Warnick, Jason E. and Jones, Vinessa K and Yarbrough, Gary L. and Russell, Tenea M. and Borecky, Chris M. and McGahhey, Reagan and Powell, John L. and Beavers, Jamie and Monte, Emmanuelle. 2002. "The 100 most eminent psychologists of the 20th century." *Review of General Psychology*. 6(2):139-152.
- Hart, K., and T. Sasso. 2011. "Mapping the contours of contemporary positive psychology." *Canadian Psychology*. 52:82-92.
- Held, B. 2004. "The negative side of positive psychology." *Journal of Humanistic Psychology*. 44(1):9-46.
- Katzko, M. 2002. "The rhetoric of psychological research and the problem of unification in psychology." *The American Psychologist*. 57(4):262-270.
- Kim, K. 2009. "What would a Bourdieuan sociology of scientific truth look like?" *Social Science Information*. 48(57):57-79.
- Kinchy, A., and D. Kleinman. 2003. "Organizing credibility: Discursive and organizational orthodoxy on the borders of ecology and politics." *Social Studies of Science*. 33:869-896.
- Knorr-Cetina, K. 1981. *The Manufacture of Knowledge: An Essay on the Constructivist and Contextual Nature of Science*. Oxford: Pergamon Press.
- Kristjansson, K. 2010. "Positive psychology, happiness, and virtue: The troublesome conceptual issues." *Review of General Psychology*. 14(4).
- Latour, B. 1987. *Science in Action: How to Follow Scientists and Engineers through Society*. Cambridge, Mass: Harvard University Press.
- Lazarus, R. 2003. "Does the positive psychology movement have legs?" *Psychological Inquiry*. 14(2):93-109.
- Lyubomirsky, S., and A. Abbe. 2003. "Positive psychology's legs." *Psychological Inquiry*. 14(2):132-136.
- Martin, M. 2007. "Happiness and virtue in positive psychology." *Journal of the Theory of Social Behaviour*. 37(1).

- Maslow, A. 1954. *Motivation and Personality*. New York: Harper.
- Matthews, G., and M. Zeidner. 2003. "Negative appraisals of positive psychology: A mixed-valence endorsement of Lazarus." *Psychological Inquiry*. 14(2):137-143.
- McAdam, D., S. Tarrow, and C. Tilly. 2001. *Dynamics of Contention*. New York: Cambridge University Press.
- Morgeson, F., M. Seligman, R. Sternberg, S. Taylor, and C. Manning. 1999. "Lessons learned from a life in psychological science: Implications for young scientists." *American Psychologist*. 54:106-116.
- Peale, N. 1996. *The Power of Positive Thinking*. New York: Ballantine Books.
- Peterson, C., and N. Park. 2003. "Positive psychology as the evenhanded positive psychologist views it." *Psychological Inquiry*. 14(2):143-147.
- Peterson, C., and M. Seligman. 2004. *Character Strengths and Virtues: A Handbook and Classification*. Oxford: Oxford University Press.
- Seligman, M. 1998. Positive psychology network concept paper. Accessed March 4, 2012 from <http://www.psych.upenn.edu/seligman/aparep98.htm>.
- . 2002. *Authentic Happiness*. Boston, MA: Nicholas Brealey Publishing Limited.
- . 2011. *Flourish: A New Understanding of Life's Greatest Goals and What it Takes to Reach Them*. New York: Free Press.
- Seligman, M., and M. Csikszentmihalyi. 2000. "Positive psychology: An introduction." *American Psychologist* 55(1):5-14.
- . 2001. "Positive psychology: An introduction: Reply." *American Psychologist* 56(1):89-90.
- Seligman, M., and J. Pawelski. 2003. "Positive psychology: FAQs." *Psychological Inquiry*. 14:159-163.
- Seligman, M., T. Steen, N. Park, and C. Peterson. 2005. "Positive psychology progress: Empirical validation of interventions." *American Psychologist*. 60:410-421.
- Shapin, S., and S. Schaffer. 1985. *Leviathan and the Air Pump: Hobbes, Boyle and the Experimental Life*. Princeton: Princeton University Press.
- Snyder, C., and S. Lopez. 2009. *Oxford Handbook of Positive Psychology*. New York: Oxford University Press.
- Yen, J. 2010. "Authorizing happiness: Rhetorical demarcation of science and society in historical narratives of positive psychology." *Journal of Theoretical and Philosophical Psychology*. 30(2):67-78.

ABOUT THE AUTHOR

Jonathan Simmons: Jonathan Simmons is a Sociology PhD student at the University of Alberta. His doctoral research involves an investigation of the value-system embraced by members of the skeptical movement and how appeals to science constitute lifestyle actions. Some of his other interests include lifestyle movements, the sociology of religion and secular studies, and the advancement of the public understanding of science and technology.

Copyright of International Journal of Science in Society is the property of Common Ground Publishing and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.