

Interdependence and superordinate goals: The revenge of the dualists

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ABSTRACT: Appearances can be misleading, but not in the social sciences. Based on the statistical aggregation of intuitions (observations, self-reports, interviews) about reality across individuals that converge while seeking a 1:1 relation, the primary model of decision making attempts to make intuitions rational. But despite its many claims to the contrary, the social sciences have failed in building a successful predictive theory, including in economics where the results from this failure, re-labeled as irrational, have won Nobel prizes, yet irrational humans in freely organized and competitive teams strangely manage to be extraordinarily innovative. In contrast to traditional social science, the most predictive theory in all of science is the quantum theory, each prediction confirmed by new discoveries leading to new predictions and further discoveries, but the dualist nature of the quantum theory makes it counterintuitive despite more than a century of intense, unflagging debate. By re-introducing dualism into social science with a quantum-like theory of social interdependence, we offer an opportunity to rehabilitate social science by successfully making predictions and new discoveries about human teams that account for the abysmal performance of interdisciplinary science teams; that generalizes to the newly arising problem of how to engineer hybrid teams (arbitrary combinations of autonomous humans, machines and robots); and that explains the counterintuitive prediction that highly interdependent teams do not generate Shannon information, but instead “darken” as a team becomes perfect, meaning, intuitively, that structural information about a team can be gained only under competition (i.e., perturbation theory).

Introduction

After Copernicus discovered that motions of heavenly bodies were counterintuitive, Kant (1755-70) reasoned that intuitions mislead human observers by not conforming to objects, rather,

in a manner contradictory to the senses ... [let us] seek for the observed movements not in the objects of the heaven but in their observer ...

Kant's reasoning has not been adopted by social scientists. Consider decision theorists. Ignoring Kant, based on the convergence of simple observations (e.g., polls), Tetlock & Gardner (2015) concluded forecasting "is a skill that can be cultivated", and that prediction, politics and human affairs are not inscrutable, but instead like weather forecasting where short-term predictions are possible, rational and reasonably accurate. However, their first "superforecast" that Brexit would not be supported by the British electorate failed, as did their second superforecast that Trump would not be elected as the next U.S. President (Lawless 2017a,b)¹.

To explain the Tetlock-Gardiner failures and other anomalies, our research on the quantum-likeness of interdependence supports the dual nature of human affairs first theorized by Bohr (1955). In agreement with Bohr, we have found that the more certain are social scientists about the human observations of behavior (e.g., based on interviews, surveys or self-reports), the less certain becomes the information gained about the human behavior being studied, nullifying predictability (Zell & Krizan 2014); e.g., despite the strong claims over decades about the importance of self-esteem for academics and work (Diener 1984), in a 30-year meta-analysis, Baumeister and colleagues (2005) found virtually no association between self-esteem and either academics or work; also, social scientists extol the value of standardized tests, even though the variability that these tests account for is unacceptable in the engineering of hybrid teams (e.g., Kuncel and Hezlett. 2007 argue that the standardized GRE test scores predict the success of graduate students, but their averaged observed correlation of less than 0.30, corrected to about 0.40, means that between 80-90% in the variance of a graduate student's success is unaccounted; for a rehash, see Kuncel & Sackett, 2018); and from a news report in *Science* (Cohen 2013):

The women reported using PrEP 90% of the time, and their unused returns seemed to validate that figure. But when the researchers later analyzed blood levels of drugs in the women, they found that no more than 30% had evidence of anti-HIV drugs in their body at any study visit. "There was a profound

1 see <http://goodjudgment.com/superforecasting/index.php/2016/11/03/is-donald-trump-mr-brexit/>

discordance between what they told us, what they brought back, and what we measured,” infectious disease specialist Jeanne Marrazzo said.

These examples characterize a problem with measurements that Wendt (2015, 67) described as “the apparent impossibility of an objective measurement”. For humans, we claim that the dual nature of interdependence creates the measurement problem in human affairs (Lawless 2017a, b).

From Plato and Aristotle to Descartes, dualism has a rich history. An early devotee, James (1892) coined the term complementarity for different parts of consciousness sharing no knowledge from other parts (p. 206), confirmed by Gazzaniga’s (2011) study of split-brain patients: “the left half did not know what the right half was processing” (p. 57). “Complementarity” is the term borrowed from James by Bohr for his theory of quantum indeterminacy (Pais 1991). Since Einstein, Bohr and Schrodinger, the quantum model has become the most successful predictive theory ever (Weinberg 2017a). James, however, eventually rejected dualism in favor of pragmatism, a rejection loosely transformed into today’s experiential monism (Stubenberg 2017) to support the “rational” model of decision-making. Not following James, Lovejoy (1930), his student, in vain, turned against James in support of dualism:

The revolt—within the realistic provinces of philosophical opinion—against dualism, both psychophysical and epistemological, has failed. (p. 264)

Lovejoy lost his battle. Similarly, the theory of group dynamics, introduced by Lewin (1951), the founder of social psychology, has become a blind alley for his model of interdependence. Witness this claim from the esteemed social psychologist Jones (1998, 33),

useful theory has been difficult to develop ... [probably] by the bewildering complexities involved in the study of interdependent relations.

Not resolving these “bewildering complexities” has left researchers in the social (e.g., economic, humanistic, philosophic, networks, game theory) disciplines struggling to predict the outcomes of basic interactions, exemplified by the difficulty in replicating experiments (Nosek 2015); left them aimless (Hofman et al. 2017); and left them stunned by the achievements of their colleagues in the hard sciences (e.g., physics, chemistry, biology, engineering). The philosophy or history of science, where the search for truth goes to die, has replaced the foundations inherent in science with endless debate (Nickels 2017).

Endless debate is a clue: Even as they preside over their exquisitely predictive discipline, quantum scientists have struggled for a century over the interpretation of the quantum

(Weinberg 2017a). Putting that aside momentarily, the social sciences have been built atop methodological individualism (MI), the supremacy of the individual but with no theoretical value generalizable to teams (Ahdieh 2009). Yet, at this point in human history, predictability is critical, to borrow from Kuhn (1962/1970, 169), to find “the solved problem” for a theory of hybrid teams, otherwise their construction and use, unlike designing and perfecting bridges, will be *ad hoc*.² Worse, ignoring the warning by Jones about the bewildering nature of interdependence, the National Science Foundation’s (NSF) has repeatedly and blithely called for more interdisciplinary scientific teams in the pursuit of new research. Yet, based on the work of Cummings (2015), the National Academy of Sciences (NAS; see Cooke & Hilton 2015) reported that interdisciplinary scientific teams performed the worst of all. In a public discussion with Cummings, we concluded that the failure of interdisciplinary scientific teams to perform had little to do with interdisciplinarity, *per se*, but with redundancy.

“Redundancy” is the tale of an unexpected discovery in social science based on a new theory of teams that provides mathematical metrics for human and hybrid teams. Shannon’s information theory argues that teams and organizations should minimize interdependence (mutual information); similarly, experimental social psychologists recommend that interdependence should be statistically removed to increase the replicability of an experiment (Kenny et al. 1998, 235). But the result of this advice from both disciplines has led social scientists to discount the value of interdependence, analogous to believing that the study of the atom would be easier without having to deal with its “pesky” quantum effects.

Returning to the report by NAS (Cooke & Hilton 2015; Cummings 2015), based on informal analyses, the most productive science teams maximize interdependence. From Wendt (2015), “humans live in highly interdependent societies (p. 150) ... [where they form] organized, structured totalities in which parts and whole are dynamically interdependent ...” (p. 134). In support, we found that redundancy decreases interdependence; increases the opportunity for corruption; and reduces the ability of teams to innovate (Lawless 2017a,b).

Interdependence signifies a communication between two or more agents, where the interdependence inherent in public competition, such as public debate, becomes a “multiplex” communication to an audience of witnesses; e.g., politics, science, juries, entertainment. The interference from interdependence, both constructive and destructive, is the competition inherent in checks and balances that limits power, demonstrated by Justice Ginsburg’s (2011) unanimous ruling rejecting the

² The first attack ever by a swarm of drones has already occurred: “A series of mysterious attacks against the main Russian military base in Syria, including one conducted by a swarm of armed miniature drones ...” (Sly 2018).

Environmental Protection Agency's (EPA) rule for CO₂ until it was made ripe by an "informed assessment of competing interests".

Needed is a theory of teams like ours that combines rationality and interdependence based on mathematical principles which we continue to develop and review in this progress report. Without a mathematics of interdependence, hybrid teams in the future will remain intuitive, inefficient or not effective. For a mathematical grasp of interdependence, which works like quantum entanglement, we have divided it arbitrarily (the only way possible) into bistable views (e.g., action-observation; Tribe-1 versus Tribe-2; prosecutors versus defense attorneys; Einstein's interpretation of reality versus Bohr's); uncertainty from the convergence of interpretations, producing incompleteness; and the inability to factor social states (e.g., the measurement of an interdependent social object affects the object measured).

The bistable views of different tribes

In Kuhn's (1977) view, a set of ideas developed within a paradigm impede the alternative views of reality that arise among different cultures or groups (Tajfel 1970), like liberalism versus conservatism, prosecutors versus defense attorneys, or pre-Planckian physicists versus quantum physicists, thereby generating a tension whenever an anomaly cannot be explained by the prevailing beliefs, easily dismissed when there is no means to test a new idea, but when there is, creating the tension essential to change. Unlike philosophy which is debatable but untestable, physical theories, made testable by their predictions with mathematics, create that tension naturally when users consider an equation's new applications or its generalizations to new physical theory; still, an equation's interpretations or paradoxes can create conflict like with the endless quantum debates.

Convergence

The value of interdependence depends on the free movement of ideas, people and capital, why the first target of an autocratic government is censorship (e.g., see the *New York Times* article about censorship in Turkey; in Gall 2018); why a business might try to silence its opposition (NYT 2018); or why a majority religion might choose to persecute a religious minority (Kishi 2017). By forcibly promoting individualism, however, censorship kills civic and other intellectual forms of innovation (for censorship in Russia, see Varadarajan 2018). But, unlike MI, interdependence advances social theory.

From Shannon, in words, joint information is greater than (as the dependence between agents increases) or equal (as the independence between agents increases) to its contributors³:

$$\text{information}_{\text{joint}} \geq \text{information}_{\text{agent1}}, \text{information}_{\text{agent2}} \quad (1)$$

(mathematically, $H_{A,B}$ is the joint entropy of two sources or agents and H_A or H_B is the entropy of one agent, giving: $H_{A,B} \geq H_A, H_B$). The point to be taken from Shannon is that censorship reduces the value of interdependence as a resource.

In contrast to Ginsburg's (2011) "informed assessment of competing interests", few appreciate that the value of interdependence improves social welfare by solving problems (Kuhn 1962/1970). Instead, recently, there has been a turn away from "checks and balances" as a means to improve social welfare by replacing it with (Vermeule 2018):

the administrative state ... [where its] agents may have a great deal of discretion to further human dignity and the common good, defined entirely in substantive rather than procedural-technical terms. ... agents with administrative control over default rules may nudge whole populations in desirable directions, in an exercise of "soft paternalism" ...

Vermeule's hopes are wistful. In addition to the "soft paternalism" exhibited above by EPA, Turkey or Russia, the turn away from checks and balances threatens social welfare, illustrated by the time when the U.S. Department of Energy (DOE) operated almost unimpeded by public oversight and when DOE alone had the authority implied by the "soft paternalism" in its management of military nuclear wastes for the "common good" but, instead, DOE produced extraordinary and widespread contamination of the environment across the U.S. (Lawless et al. 2014). Further, in the cleanup since, motivated by DOE's guidance to use the cooperation inherent in consensus-seeking for decision-making by DOE's Citizens Advisory Boards (CAB), its CAB at Hanford provides a comparison versus the competitiveness inherent in the majority-ruled CAB at DOE's Savannah River Site in SC, one of the sites which rejected consensus-seeking to make its decisions. The result: SRS has had a significantly better, faster and safer cleanup than the Hanford site, the latter mired in endless debate and legal strife; e.g., even though the process for the vitrification of high-level radioactive wastes was innovated at Hanford, vitrification began at SRS in 1996 but has not yet begun at Hanford. As we had predicted, and as supported by the European Union (WP 2001), consensus-seeking is how a minority controls a majority by blocking its ability to make a decision:

3 Where is the joint entropy of two sources or two agents and or is the entropy of one agent, giving:

The requirement for consensus in the European Council often holds policy-making hostage to national interests in areas which Council could and should decide by a qualified majority. (p. 29)

Non-factorability

Applying Von Neumann to a state of interdependence, the joint information is less than (as the teamwork increases between agents) or equal (as the teamwork between agents ceases, becoming equal to Shannon information) to its contributors:

$$\text{information}_{\text{joint}} \leq \text{information}_{\text{agent1}} + \text{information}_{\text{agent2}} \quad (2)$$

(mathematically, $S_{A,B}$ is the joint entropy of two interdependent sources or agents and S_A or S_B is the entropy of one agent, giving: $S_{A,B} \leq S_A + S_B$). Equation (2) explains non-factorability. Mindful of Kant, it confirms the biological value of deception, including for humans (a con artist; a military feint; a private affair). But, more importantly, Equation (2) predicts that when a team is working to perfection, the information it generates disappears as the information from its interactions go dark, meaning that the effect of counting the contributions from a team's members by an outside observer is no longer trustworthy (viz., by reducing the degrees of freedom in a team as a team begins to operate as a "unit"; in Lawless 2017b). This result explains why the performance of a perfect team is difficult or impossible to copy, even by the perfect team itself. It also explains why a coach or a leader for the best teams is often necessary, inadvertently making the "best" coaches wealthy.

Future research

To advance our previous research (Lawless 2017a,b), we have begun to introduce the value of intelligence to manage interdependence. The prevalence in the social interaction of interdependence forces social navigators to rely on intelligence during a competition to craft a social path that achieves a team's superordinate goal (mission) by amplifying its skills with constructive interference, mindfully using destructive interference to sharpen its focus, by deploying team boundaries to block outside interference, but thereby making its decision process opaque. Intelligence determines the members selected for a team (constructive); the shape of a team's structure that produces maximum entropy (MEP; see Wissner-Gross & Freer 2013); and the shortest social path with MEP to overcome obstacles to achieve a team's superordinate goal to guide and measure its progress. The quantum-like nature of interdependence

causes tension between the intuitions leaders use in tradeoffs under uncertainty that shape a team and its structure to achieve MEP (e.g., to maximize performance, leaders choose the skills a team needs in its competitions, the configuration of the structure that shapes its members, and their internal communications).

Conclusions

In a free society, interdependence automatically reduces redundancy. While the meaning of interdependence is meaningless (Jones' bewilderment), we conclude that interdependence is the primary resource free societies harness to shape their teams and structures to improve social welfare. That is the reason authoritarians attempt to quash interdependence as their first order of business (by censoring free speech; ending the freedom to assemble; preventing the free exercise of religion; etc.).

Interdependence is the science of human and hybrid teams, organizations and societies; it lends itself to mathematical models, to trial and error tradeoffs, but not to interpretation; it could rehabilitate the social sciences and, with Kant, the philosophy of science. It is a social science that offers interdisciplinary teams the opportunity to contribute when their skills are demanded to complete a team, but not for the specious purpose of satisfying an agency like NSF. It is the science of dualism with social people, organisms and future robots. Finally, to end the interminable quantum debates, Weinberg (2017a) wants quantum theory to be revised so it does not give a status to human observers; good luck with that!

In closing, Wendt (2015, 34) adds that a quantum-like model "offers the potential for revealing new social phenomena", which we have demonstrated by establishing the value of team boundaries, the multitasking nature of teams, and the size of teams, heretofore an open problem (Cooke & Hilton 2015, 33); e.g., for the latter, to wit, the smallest size of a perfect team is one that minimizes its redundancy, maximizes its interdependence and yet still manages to complete its mission (Lawless 2017a,b).

References

- Ahdieh, R.G. 2009. *Beyond individualism and economics*, retrieved 12/5/09 from ssrn.com/abstract=1518836.
- Baumeister, R. F., J.D. Campbell, J.I. Krueger, & K.D. Vohs. 2005, January. "Exploding the self-esteem myth." *Scientific American*, 292(1): 84-91. <https://www.uvm.edu/~wgibson/PDF/Self-Esteem%20Myth.pdf>
- Bohr, N. 1955. "Science and the unity of knowledge." In L. Leary (ed.), *The unity of knowledge*, pp. 44-62. New York: Doubleday.
- Cohen, J. 2013. "Human Nature Sinks HIV Prevention Trial." *Science* 351: 1160. <http://www.sciencemag.org/news/2013/03/human-nature-sinks-hiv-prevention-trial>
- Cooke, N.J. & M.L. Hilton, (Eds.) 2015. *Enhancing the Effectiveness of Team Science*. Authors: Committee on the Science of Team Science; Board on Behavioral, Cognitive, and Sensory Sciences; Division of Behavioral and Social Sciences and Education; National Research Council. Washington (DC): National Academies Press.
- Cummings, J. 2015. *Team Science Successes and Challenges*. National Science Foundation Sponsored Workshop on Fundamentals of Team Science and the Science of Team Science (June 2), Bethesda MD (https://www.ohsu.edu/xd/education/schools/school-of-medicine/departments/clinical-departments/radiation-medicine/upload/12-_cummings_talk.pdf).
- Diener, E. 1984. "Subjective well-being." *Psychological Bulletin* 95(3): 542-575.
- Hofman, J.M. and A. Sharma, and D.J. Watts. 2017. "Prediction and explanation in social systems." *Science* 355: 486-488.
- Gall, C. 2018, 3/4. "Erdogan's Next Target as He Restricts Turkey's Democracy: The Internet", *New York Times*, from <https://www.nytimes.com/2018/03/04/world/europe/turkey-erdogan-internet-law-restrictions.html>.
- Gazzaniga, M.S. 2011. *Who's in charge? Free will and the science of the brain*. New York: Ecco.
- Ginsburg, R.B. 2011. *American Electric Power Co., Inc., Et Al. V. Connecticut Et al.*, 10-174, <http://www.supremecourt.gov/opinions/10pdf/10-174.pdf>
- James, W. 1892/1950. *The Principles of Psychology*, 2 vols. (1890). Cambridge, MA: Harvard University Press.
- Jones, E.E. 1998. "Major developments in five decades of social psychology." In Gilbert, D.T., Fiske, S.T., & Lindzey, G., *The Handbook of Social Psychology*, Vol. I, pp. 3-57. Boston: McGraw-Hill.
- Kant, I. 1755-1770. *Critique of Pure Reason* (The Cambridge Edition of the Works of Immanuel Kant, 1998), Paul Guyer & Allen W. Wood (Ed., Tr.). Cambridge, UK: Cambridge University Press.

- Kenny, D. A., D.A. Kashy, & N. Bolger. 1998. "Data analyses in social psychology." *Handbook of Social Psychology*. D. T. Gilbert, S. T. Fiske, & G. Lindzey. Boston, MA: McGraw-Hill. 4th Ed., Vol. 1: pp. 233-65.
- Kishi, K. 2017, 6/9. "Christians faced widespread harassment in 2015, but mostly in Christian-majority countries", *Pew Research Center*, from <http://www.pewresearch.org/fact-tank/2017/06/09/christians-faced-widespread-harassment-in-2015-but-mostly-in-christian-majority-countries/>
- Kuhn, Thomas S., [1962] 1970a. *The Structure of Scientific Revolutions*. Chicago, IL: University of Chicago Press. Second edition with added Postscript—1969) published in 1970.
- Kuhn, T. 1977. *The essential tension*. Chicago, IL: University of Chicago Press.
- Kuncel, N. R. & S. A. Hezlett. 2007. "Standardized tests predict graduate students' success." *Science* 315(5815): 1080-1081, doi: <http://dx.doi.org/10.1126/science.1136618>
- Kuncel, N. & P. Sackett. 2018, 3/8. "The Truth About the SAT and ACT. Myths abound about standardized tests, but the research is clear: They provide an invaluable measure of how students are likely to perform in college and beyond." *Wall Street Journal*, from <https://www.wsj.com/articles/the-truth-about-the-sat-and-act-1520521861>
- Lawless, W.F., Mito Akiyoshi, Fiorentina Angjellari-Dajcic, & JohnWhitton. 2014. "Public consent for the geologic disposal of highly radioactive wastes and spent nuclear fuel." *International Journal of Environmental Studies* 71(1): 41-62.
- Lawless, W.F. 2017a. "The entangled nature of interdependence. Bistability, irreproducibility and uncertainty." *Journal of Mathematical Psychology* 78: 51-64. <http://goodjudgment.com/superforecasting/index.php/2016/11/03/is-donald-trump-mr-brexit/>
- Lawless, W.F. 2017b. "The physics of teams: Interdependence, measurable entropy and computational emotion." *Frontiers in physics* 5:30. doi: 10.3389/fphy.2017.00030
- Lewin, K. 1951. *Field theory of social science. Selected theoretical papers*. Darwin Cartwright (Ed.). New York, NY: Harper & Brothers.
- Lovejoy, A.O. 1930. *The Revolt against Dualism: An Inquiry Concerning The Existence Of Ideas*. London, UK: George Allen & Unwin Ltd.
- Nickles, Thomas. 2017 (Summer). "Historicist Theories of Scientific Rationality." *The Stanford Encyclopedia of Philosophy*, Edward N. Zalta (ed.), from <https://plato.stanford.edu/archives/sum2017/entries/rationality-historicist/>
- Nosek, B., corresponding author from OCS. 2015. "Open Collaboration of Science: Estimating the reproducibility of psychological science." *Science* 349 (6251): 943; supplementary: 4716-1 to 4716-9.
- NYT, (2018, 3/3), "Honduras Police Arrest Executive in Killing of Berta Cáceres, Indigenous Activist." *New York Times*, from <https://www.nytimes.com/2018/03/03/world/americas/honduras-berta-caceres.html>

- Pais, A. 1991. *Niels Bohr's Times: In Physics, Philosophy, and Polity*. Oxford, UK: Clarendon Press.
- Sly, L. 2018, 1/10. "Who is attacking Russia's bases in Syria? A new mystery emerges in the war." *Washington Post*. https://www.washingtonpost.com/world/who-is-attacking-russias-main-base-in-syria-a-new-mystery-emerges-in-the-war/2018/01/09/4fdaea70-f48d-11e7-9af7-a50bc3300042_story.html?utm_term=.cb338c653ed8
- Stubenberg, Leopold. 2017. "Neutral Monism." *The Stanford Encyclopedia of Philosophy* (Winter 2017 Edition), Edward N. Zalta (ed.), from <https://plato.stanford.edu/archives/win2017/entries/neutral-monism/>
- Tajfel, H. 1970. "Experiments in intergroup discrimination." *Scientific American* 223(2): 96-102.
- Tetlock, P.E. & Gardner, D. 2015. *Superforecasting: The Art and Science of Prediction*. New York, NY: Crown.
- Tetlock's website: Superforecasting in action. <http://goodjudgment.com/superforecasting/index.php/2016/11/03/is-donald-trump-mr-brexit/>
- Varadarajan, T. (2018, 3/9), Will Putin Ever Leave? Could He if He Wanted? A Stalin biographer contemplates Russia's weakness today, which makes its current ruler such a threat to the West." *Wall Street Journal*. <https://www.wsj.com/articles/will-putin-ever-leave-could-he-if-he-wanted-1520635050>
- Vermeule, A. 2018. "Integration from Within. Review Essay: *Why Liberalism Failed*, by Patrick J. Deneen, Yale University Press, 2018, *American Affairs* 2(1) (Spring), from <https://americanaffairsjournal.org/2018/02/integration-from-within/>
- Weinberg, S. 2017a, 1/19. "The Trouble with Quantum Mechanics." *The New York Review of Books*. <http://www.nybooks.com/articles/2017/01/19/trouble-with-quantum-mechanics/>
- Weinberg, S. 2017b, 4/6. Steven Weinberg and the Puzzle of Quantum Mechanics, replies by N. David Mermin, Jeremy Bernstein, Michael Nauenberg, Jean Bricmont, and Sheldon Goldstein, et al. In response to: The Trouble with Quantum Mechanics from the January 19, 2017 issue; *The New York Review of Books*, from <http://www.nybooks.com/articles/2017/04/06/steven-weinberg-puzzle-quantum-mechanics/>
- Wendt, A. 2015. *Quantum Mind and Social Science. Unifying Physical and Social Ontology*. Cambridge, UK: Cambridge University Press.
- Wissner-Gross, A. D., and C. E. Freer. 2013. "Causal Entropic Forces." *Physical Review Letters* 110(168702): 1-5.
- WP. 2001. White Paper. European governance (COM (2001) 428 final; Brussels, 25.7.2001). Brussels, Commission of the European Community.
- Zell, E. & Z. Krizan. 2014. "Do People Have Insight Into Their Abilities? A Metasynthesis?" *Perspectives on Psychological Science* 9(2): 111-125.