How fake science misleads managers

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Key questions that managers often ask me include: Which is the best way to select personnel for various positions? What do you think of the MBTI (Myers-Briggs Type Indicator)? Does intelligence matter? Large-scale scientific studies tell us that validated psychometric tests (e.g., The Wonderlic Intelligence test or the NEO-PI personality test) work extremely well in predicting future work performance, as do work sample tests. Structured interviews, where the manager asks predetermined work-specific questions, which are posed in the same way to all candidates, work rather well too.

How does science decide what is valid? First, a test (or method) must measure what it claims to measure. Second, a test must predict future work performance. Third, a test that measures something unique must be shown to do better than competing tests. These claims must be scrutinized by the scientific community and the results published in reputable journals.

In the medical field the usefulness of a medicine is gauged by predicting health status of patients and a new medicine's efficacy is compared to known treatments. However, medicines are vetted by an independent body, and practitioners are certified to prescribe medicines. The practice of management, unfortunately, does not work in this way, and selection tests are not approved by an independent body.

I often see invalid selection methods being used by companies. They may outsource the selection function to a consulting company or use an in-house person (who might not have the right training). One of the most popular selection tools is the MBTI, which is as good as a horoscope[1]. Why? It was developed by two individuals who were not psychologists and had no training in psychometrics. Next, the instrument purports to measure "types" or classes of individuals. However, there is no theory to explain the validity of the types, no

[1] See: (i) Antonakis, J. (2011). Predictors of leadership: The usual suspects and the suspect traits. In A. Bryman, D. Collinson, K. Grint, B. Jackson & M. Uhl-Bien (Eds.), Sage Handbook of Leadership (pp. 269-285). Thousand Oaks: Sage Publications; (ii) Hogan, R. (2017). Personality and the fate of organizations: Psychology Press. (iii) Mastrangelo, P. M. (2001). [Test review of Myers-Briggs Type Indicator, Form M]. In B. S. Plake & J. C. Impara (Eds.), The fourteenth mental measurements yearbook. (iv) The Wikipedia entry is also rather balanced in its reporting of criticisms of the MBTI. See: https://en.wikipedia.org/wiki/Myers%E2%80%93Briggs_Type_Indicator

statistically-defensible method to derive them, and no reliable evidence of the synergistic effect of the various components constituting the types; moreover, people are classed rather differently when taking the test again. Finally, the test is a lousy predictor of work-related outcomes.

Yet, the MBTI test publishers have a technical manual giving the impression to nonspecialists that the MBTI is scientifically validated. There are even conferences devoted to the MBTI as well as a scientific journal (*Journal of Psychological Type*) financed by the MBTI publishers–talk of conflict of interest! It has fancy training and certification programs too! Fake credentials and testimonials as to its popularity are all designed as a front to give the test publishers a veneer of scientific credibility, even though the findings are based on shoddy research. Although this test is the pinnacle of fake science and has been thrown in the junkyard by scientific psychologists, the company that markets the MBTI continues to make bundles of money from it. Similar outfits exist like the HBTI (Herrmann Brain Dominance Instrument) or the DISC personality model. Pseudoscientific methods like graphology or Neurolinguistic Programming (NLP) interventions–alas–continue to be very popular too. The list goes on and on!

Managers should be more skeptical of claims made by publishers and turn to industrial-organizational psychologists for guidance on how to select in a valid way. Individuals who are properly trained at universities in the topics concerned should be used as in-house human resources experts. Nowadays, time and money is just too scarce to squander on slick pitches of snake-oil salespeople. Not only is it the economical thing to do in the long run; it is also the ethical thing to do!

Snake oil (i.e., "Poudre de perlimpinpin" in French), sold by charlatans was marketed as an elixir that could cure a variety of ailments. Testimonials, apparent wide-spread use, and pseudoscientific claims were used to promote it. Fake science products have the same modus operandi.
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