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THEORY AND PRACTICE IN INDUSTRIAL PSYCHOLOGY

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Abstract:

This article critically evaluates the science and practice of industrial psychology. It reaches the conclusion that a major shift in paradigm and mind-set is essential for the discipline to survive. The article discusses assumptions about knowledge within the science and practice of industrial psychology and suggests ways to expand the notion of scientist and practitioner. It also discusses modes of knowledge acquisition within industrial psychology and proposes a post-modern view of the interface between theory and practice. It concludes with suggestions to revitalise the interface between theory and practice.

KEY WORDS:

theory and practice, scientist, practitioner, revitalising interface, post-modern view.

INTRODUCTION

As far back as 1913, Hugo Münsterberg touched on the notions of scientist and practitioner in his seminal work *Psychology and industrial efficiency*, devoting an entire chapter to a discussion of means and ends. He came to the following conclusion in his reflection on the newly founded discipline of applied psychology:

“In other words, we ask how to find the best possible man, how to produce the best possible work, and how to secure the best possible effects . . .”

At the point when the Psychological Corporation was established in 1930, it unmistakably emulated the substance of Münsterberg's meaning of connected brain science in portraying its capacity.

The articles and forces of this partnership might be the progression of brain science and the advancement of the valuable application of brain research . . . It should have the forces to render administrations including the application of brain research to instruction, business, organization and different issues.

The debate about what constitutes industrial psychology was continued by Titchener (1914), Weld (1928), Vitelis (1931), Carmichael (1930) and, more recently, Dunnette and Hough (1990), Campbell (1990) and Landy and Conte (2004). In 2001, a special edition of the *South African Journal of Industrial Psychology* was, in fact, dedicated to a discussion regarding the future of industrial psychology as a discipline and profession (Veldsman, 2001).

The aim of this article is to revisit the debate on the science and practice of industrial psychology and to put forward suggestions for revitalising the interface between theory and practice in this field.

When looking at the current balanced score-card of the profession of industrial psychology, it

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seems as if the dreams of Münsterberg and his contemporaries have not yet come to fruition.

In 1990, Dunnette asked whether practitioners of industrial and organisational psychology are using the best that the field has to offer and whether the science and practice of the discipline have a synergistic impact on each other. He came to the harsh conclusion that industrial psychology is not doing well. He blames, among others, the “burden of the publication process” and continues by saying that “. . . what is published does clearly suggest that a potential serious schism exists between the two worlds of industrial and organisational psychology, the academic and the non-academic the science and practice”.

This schism is extensively addressed by McIntyre, who is very critical of the current status of the science and practice of industrial psychology:

Associations constituting the work environment suggest conversation starters with a fretful soul. Thus, science's system for noting these inquiries taking into account information accumulation, information investigation, also mindful conclusions – is seen in the working environment as 'immaterial'. Since their essential objectives contrast, science and the working environment are in a broad sense contradict.

The state of science was extensively discussed during the last three decades by Guion (1988), Campbell (1978; 1982; 1987), Dunnette (1984), Owens (1983) and Vroom (1983), during which barriers to good science were identified.

As far back as 1988, Guion criticised the reward system in academia. He coined the term “publish or perish” and referred to “publication fever”, a disease with the symptom to publish everything in the absence of anything important to say. In his criticism of the reward system, Guion warned about the consequences of such a system:

The primary result of these opposing reward systems is to weaken seriously the level of excellence of what appears in our journals from what could be. Persons in academia are often pressurized by the system into trying to publish small studies, incompletely conceived and conducted, and far from constituting increments in our science. Our journal editors face an impossible task. No matter how they try, they cannot singlehandedly change an ingrained reward system. The result, as we all recognize, is that the ratio of chaff to wheat in our journals is higher than we would like.

On the same subject, Dunnette and Hough (1990, p. 16) allude to a little study done by John Campbell in 1982 in which he asked scientists to portray the circumstances encompassing the studies that they had finished and which, all things considered, they viewed as not adding up to much. These circumstances were portrayed by angles, for example, (a) the accessibility of a database, (b) the chance to make utilization of a made wonder, (c) the requirement for a fast production, (d) the longing to address a point that was "hot" at the time, (e) an endeavor to get an alternate article out of old information by basically utilizing an alternate measurement, (f) the necessity to do a study on another person's agreement on an issue that was of no inherent investment and (g) a chance to perform a simple replication of an alternate venture.

It is fair to ask whether industrial psychology has done any better during the past 15 years. It does not seem so: industrial psychology might even have lost ground. The fads, fashions and folderol pointed out by Dunnette as far back as the mid- 1960s (Dunnette, 1966) are indeed still alive and well in South Africa. Industrial psychologists still keep their pets, have their fun, suffer their delusions, keep their secrets and ask their questions. Research at academic institutions is often neither needs-driven nor problem-orientated; it appears rather to be a function of data availability and that the norm is the recycling of available data and pursuing of hot topics. There is an explosion of research on notions like emotional intelligence, leadership, personality, and burn-out and stress. In academic circles, those who try to apply knowledge in their teaching and consulting to organisations are often (almost bizarrely) labelled practitioners, while their colleagues who publish (irrespective of the quality or usefulness of the publications) are labelled academics. It is very much “publish or perish”, the academic bean-counters seeming concerned only about quantity. What is often missing in research publications is convincing arguments for the significance of the research questions. One is often left with the “So what?” question. Published research is, in reality, often discounted by the captains of industry as a waste of time.

Pietersen (2005) deals extensively with the strengths and weaknesses of industrial psychology in South Africa. In his article, he utilises a meta-theoretical approach to assess the nature of knowledge development in industrial psychology. Dealing extensively with the recent reviews of industrial and organisational psychology as a discipline, he concludes that there is a lack of focus on aspects of knowledge development in industrial psychology other than the usual concerns of the discipline, both applied and practised.

Pietersen (2005, p. 84) proposes that industrial psychology must “embrace additional knowledge perspectives, theoretical frameworks, research strategies, methods and literatures beyond that which are currently in use.” If this were done, he is convinced that industrial psychology “will continue to be and become more relevant as an organisational science/discipline in South Africa”.

Despite the above, however, uneasiness remains regarding the tension between the theory and practice of industrial psychology.

Garvey and Griffith (1963) estimated that 50% of the papers published in American Psychological Association (APA) journals are read by fewer than 200 people and that two-thirds of the articles are never cited by another author.

It is difficult to escape the conclusion that, of all the research projects designed, the proportion that is actually supported, conducted, written up, published, and read by an appreciable number of people is very, very small.

The discipline is clearly at a critical juncture and both academics and practitioners are to blame. When one looks at the state of the practice, it becomes apparent that concepts like “psychology” and “industrial psychology” are often disliked in the world of work. Industry finds the scientific method impractical and burdensome and often of little relevance to the solving of people-related business issues; industrial psychology scores very low on the critical scales of industry.

In the event that we have educated anything about connected critical thinking in modern and authoritative brain science, it is that the usage of “projects” anticipated that would work as promoted, after the beginning whirlwind of consideration, is normally destined to disappointment.

Many of the theories and models possibly have very little ecological value; they fail to address the real, practical issues. Despite the fact that this is an often-told story, industrial psychology does not seem to be doing better; it seems rather to be doing worse. The result is that both the scientific and the practical aspects of the field suffer. There is, in fact, a real danger that industrial psychology might become an exclusive, academic discipline and that the application of psychology in the world of work might be left to practitioners who are poorly trained theoretically and dangerously incompetent in the application of the body of knowledge of industrial psychology to real-world problems. It seems that applied psychologists are slow learners and that a major shift in mind-set and paradigms might now be the only way out of the dilemma.

Given the difficulty of its chosen assignment, psychology has compounded its problem by devaluing teaching and public service in favor of doing research. As a result, more people are conducting research than should be, spreading the available resources too thinly and filling the journals with too much that are unimportant. We seem particularly susceptible to overuse of jargon and the pursuit of faddish research topics.

Sweder and Fiske (1986) question the contributions of industrial and organisational psychology to applied problems, be they organisational or societal. They refer to the common problems of, for example, decreasing educational achievement, shrinking job skills and a drop in productivity. Industrial and organisational psychology simply cannot provide answers to such problems, despite sizeable growth in the discipline over the past 25 years.

It is time to continue the debate, a debate that will hopefully help to ensure that industrial psychology does better in the 21st century. Such a debate will require a revisit of current paradigms and a serious look at the state of the science and practice of industrial psychology. What follows is a further contribution to this debate.

ASSUMPTION ABOUT KNOWLEDGE

Landy and Conte (2004, p. 6) recently stated that “. . . the simplest definition of industrial and organizational psychology is the application of psychological principles, theory and research to the work setting . . .” They articulate their definition in greater detail by stating that “. . . I/O psychology facilitates responses to issues and problems involving people at work by serving as advisors and catalyst for business, industry, labor, public, academic and health organizations . . .” (Landy & Conte, 2004, p. 7) and that “I/O psychology needs to be relevant and study the problems of today, not those of yesterday . . . I/O psychology needs to be useful and the I/O psychologist must always be thinking of ways to put our research into practice . . . I/O psychology must be grounded in the scientific method.

The definition and goals clearly include both science and practice; they also refer to the tension between science and practice. The tension between the science and practice sides is probably the first issue that needs to be revisited and addressed.

The strain in the middle of science and practice is multidimensional and brought about by numerous components. A standout amongst the most basic variables is the distinction in the presumptions made by scholastics and analysts in making what they consider learning, from one perspective, and the suspicions made by professionals and chiefs in utilizing what they consider information, then again. Both appear to have their own particular perspective of reality or edge of reference.

As per Klimoski (1992) presumptions about information have a few parts, and call attention to that

hypothesis and practice vary on each of them. There is an acceptable contrast in the way that we ponder learning; we can call this the cognitive segment. Scientists frequently like to think regarding destination, measurable information, for instance, while professionals and chiefs quite often want to think as far as experiential information. Science ordinarily puts the helpfulness of examination discoveries in a bigger connection. Experimental enquiry is frequently led through four expansive stages: the researcher endeavors to conceptualize an issue; a hypothesis or model is figured or existing speculations are adjusted; conceivable arrangements or results from the model are formed; and the model is advanced as a solution for the issue. Dismissing any of these stages can harm the legitimacy of investigative examination. Experimental request often, then again, overlooks issues from the universe of work from the examination process. The researcher frequently conceptualizes an issue without doing a rude awakening on the issue. In other words, it may be a conveniently planned issue in principle yet it needs pertinence in this present reality; it fails to offer the synergistic impact referred to by Dunnette and Hough.

The science of industrial psychology and its paradigms has been around for decades and is well developed. The scientists and practitioners of industrial psychology, however, still argue over what constitutes relevance (Campbell, 1990; Klimoski, 1992): descriptive relevance reflects the adequacy of a theory for capturing the essential properties of a phenomenon as it impacts on organisations; goal relevance reflects the correspondence of the outcome variables of a theory with the issues that decision makers may wish to influence (Klimoski, 1992). Industrial psychologists are often reluctant to adopt, as dependent variables, the business variable by which managers must live or die. Indeed, they often conceptualise and formulate their "own unique problems", once again without doing a reality check.

Operational validity can be found in theories that offer guidance for implementation and intervention. The scientist prefers traditional or technical validity, while the practitioner employees in the world of work (the practice side). The scientist practitioner model has always been a necessary part of the field. Without it, the field has no claim to distinction.

This does not, however, imply that all activities must necessarily involve both science and practice. In most cases, industrial psychologists tend to vacillate between the two roles or prefer one role to the other.

It is, however, fair to say that most industrial psychologists enjoy the possibility of contributing to both science and practice; it is part of their professional identity. Academics do usually, however, stress the primacy of science. Similarly, practitioners usually feel that good application is only as good as the knowledge on which it is based.

It is also fair to say that tension between science and practice has existed from the earliest days of the field. While some have anguished over this, others have viewed it as a normal and even healthy interplay. Scientific practice and practical science – what could be better? Trying to live up to this model, however, could well be very challenging for academics and practitioners.

MODES OF KNOWLEDGE ACQUISITION

Klimoski (1992) coined this notion in his presidential address to SIOP and went on to say that true interaction between science and practice is absolutely essential for the field of industrial psychology to be viable. It is indeed possible for this vision to be realised but it will take a huge effort and a change in mindset and paradigm. It is also highly dependent on a willingness to alter thinking about what constitutes science and, especially, what are considered legitimate modes of knowledge acquisition.

In thinking about science and what constitutes a contribution to knowledge, several answers come to mind. Perhaps foremost are the theories and models dealing with psychological phenomena? Because industrial psychology is an applied field, another contribution involves the developing and testing of models of psychological processes and systems as they exist in the world of work. Theories and models for effective organisational practices most certainly also contribute to science. It is of vital importance that such a broader definition of scientific contribution be accepted. Many problem areas in an organisational context have previously been ignored by researchers. The acceptance of such a mutual contribution to science, however, could provide the impetus for model building and theory development for organisation-specific problem solving.

It is also necessary that the working theories of practitioners as best practices be accepted until they can be explained by existing or new theories. In this way, the work of practitioners would gain higher appreciation and could become the departure point for new research. To adopt an ostrich approach and simply argue that interventions cannot work because they do not fit existing theories is short-sighted and could even be detrimental to the discipline.

There are two ideal models that are frequently utilized via specialists. The one can extensively be termed request from the outside. Here, scientists will be utilized for the most part by colleges or research

foundations and channel their research from a vantage point outside of associations. The other ideal model that possibly exists can be termed request from within. This proposes that experts inside associations are likewise doing logical and expert work.

By comparing these two paradigms according to a number of criteria, Klimoski (1992) clearly highlights their differences. Looking at the relationship between the researcher and the organisational setting, inquiry from the outside (the conventional model of science) is typified by detachment. Here, knowledge and understanding are obtained mainly through interviews and survey data obtained at a given time. Inquiry from the inside assumes that the researcher must be aware of the realities of the situation through personal involvement. From this basis of validation, the researcher emphasizes sound measurement and logical comparison. The practitioner in the real situation relies on personal knowledge of the situation, validated through experience in the organisation.

From the perspective of the wellspring of the examination, a further contrast is apparent. In the conventional ideal model, the specialist preselects the classifications for examination and tests them by expressing a research theory. The specialist, on the other hand, is not bound by preselected classes however will be rather guided by experience in and with the pragmatic circumstance. The essential objective of a request from the outside is generalisability, while request from within looks for data about and significant responses to the interesting circumstance inside a particular association. Request from the outside looks for widespread information; request from the inside looks for learning relevant to a particular circumstance. It will be therefore clear that the results looked for by the researcher and specialist is inconceivably diverse.

It is perhaps fair at this point to ask what knowledge is. According to the paradigm of investigation from the outside, the scientist seeks universal principles in organizational life and tries to limit the effect of a specific situation. As a result, systems, theories and trends are accepted only when they hold the same meaning across many situations. Investigation from the inside attempts to gain insight into human behavior as it manifests itself within a situation. Models, theories and systems have limited, if any, relevance when they are isolated from a situation. Valid knowledge is often needed for the effective management of a particular situation; responsible action needs measurement for successful management. The practitioner is an actor within an organization and tries to find situational anchors in order to decide on appropriate action. There is investigation, there is knowledge, there is validation, but these are by no means carbon copies of the formal scientific method.

Inquiry from the outside and inquiry from the inside are often prompted by different circumstances and done for different purposes. Both must, however, be viewed as systematic and valid modes of knowledge acquisition. There is clear justification for both paradigms. Neglecting the paradigm of inquiry from the inside, however, is not only short-sighted but also detrimental to the utility of the discipline of industrial psychology. The recognition of the importance of inquiry from the inside will not only narrow the divide between theory and practice but also enhance the knowledge base of the discipline.

Post-modernism in the philosophy of the science of industrial psychology

Going beyond the traditional paradigms as spelt out in the previous section will allow the redefinition of the interface between the work of the scientist and the work of the practitioner.

The approach to knowledge acquisition termed "inquiry from the inside" must be viewed as part of the more general postmodernism movement in the philosophy of science. Postmodernism offers an alternative conception of the interface between science and practice, an alternative that emphasises the mutual interdependence of science and practice.

A post-modern approach does not deny the validity of traditional modes of inquiry but views them as only one way to generate knowledge. Practical reasoning, as used in consulting and managing, for example, can also serve the purpose of science. Thus, in a post-modern view, practice is no longer only the application of scientific finding; it is also the setting for knowledge development through practical reasoning. Practice now becomes another venue for theory development and hypothesis testing. Theories developed without sufficient job-relatedness lack ecological validity; they fail to perform in application and often have to be modified or even abandoned. If the post-modern view were adopted, the scientist-practitioner model would be redefined. Both academics and practitioners would be viewed as legitimate contributors to knowledge. More importantly, both groups would be expected to contribute to knowledge, albeit each in its own way.

The acknowledgement of a post-cutting edge approach holds numerous potential advantages. Scholastics could, for instance, improve use of experiences nearing from associations and created through request from within. Exploration distributed in diaries would likewise be a better impression of the commonality of science and practice, a reflection that is frequently tragically absent. Showing would besides be more important and non-scholastics would progressively see themselves as donors to the

assortment of information of our control. Moreover, modern brain science would get to be stronger; the dialog between researchers and experts would be improved and common appreciation between the researcher and the professional would get to be stronger. A superior modern brain science would be the final result.

Revitalizing the interface between theory and practice

The most important vehicle to revitalise the interface between theory and practice is probably the training of future industrial psychologists at tertiary institutions. Lykken (1990) proposes an interesting role-playing exercise in which an eminent older physicist and an eminent older psychologist return to their graduate oral examining committees, convened in 1960, for example, to compare what they know now in their respective fields to what was known more than four decades ago. The members of the physics committee would sit in open-mouthed wonder at the tales told by their former student. But how would the psychology committee react to what the former student had to say?

Students should first and foremost be properly schooled in the theories, models and systems of psychology and industrial psychology. It would also be necessary to identify the competencies needed to articulate and translate these theories, models and systems for the decision makers who are responsible for people-related business issues in the world of work. These vital competencies (often sadly missing in curricula) should include notions like diagnostic skills, strategic planning, strategic flexibility and a results-orientated approach. Further issues that spring to mind would be the capacity to make things happen, effective writing and communication skills, applicable interpersonal competencies and a practical orientation. Future industrial psychologists should be able to articulate and translate their discipline for decision makers. This would require the revisiting of current training paradigms in industrial psychology. Revitalizing the interface also calls for more visible contact between academics and their counterparts in industry. Academics should spend more time in industry and practitioners should become increasingly involved in training at universities. Non-academics should work with academics with a common purpose, mutual respect and a two-way flow of useful knowledge. Best practices should be accepted as state-of-the-art applications, even if current models and theories cannot fully explain the effectiveness of the best practices. The result of such revitalised mutuality between science and practice would hopefully be high-quality, relevant and useful applied science and effective informed practice.

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