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Behaviour Change: Making an Impact on Health and Health Services

Getting to know the keynotes

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Please identify a moment that changed the course of your career.

As a graduate student in the mid-1970's, I was told by my graduate mentor not to pursue my quest to integrate biological and social analyses in my research. Up to that point, I was uncertain the effort would be worthwhile. My graduate mentor's assertion made me think more deeply about the pursuit, and I became convinced that the quest required that I develop a mathematical framework for the multi-level analyses I wanted to pursue (which we did completed just over a decade later). I also became convinced that the pursuit was feasible and worthwhile.



Please identify one challenge that health psychology should be addressing, but is not.

Basic and applied research in health psychology has become much broader and more interdisciplinary than it was even a decade ago. In doing so, the field has taken on new challenges such as the conduct of rigorous multi-level analyses to specify the transduction pathways and underlying mechanisms responsible for the association between behavioral/psychological factors and mor-

bidity and mortality. The specification of these pathways and mechanisms lays the groundwork for the development of more effective interventions to improve the health and well-being of our society. We have much more to do, of course, but to see the engagement of this challenge by the field and the progress made is impressive. I hope that more in the field are attracted to work on this grand challenge in science.

Please identify one journal article that all psychologists should read (not an article that you authored).

John Platt (1964). Strong inference. *Science*, 146, 347-353. On the surface, the article seems, well, dated. Take a bit of time to think about the questions and analysis, and you will likely find it to be thought provoking and replete with epistemological insights.

What is the most important lesson that you have learnt?

Scientific integrity is paramount.

What advice would you offer to young psychologists? What would you research if you have unlimited money and resources?

I would advise young scientists that major scientific advances may be remembered for a single

study, but most such advances are the result of programs of research. Identify and parse a complex research question into smaller, tractable series of research questions that ultimately constitute a systematic and meticulous program of research. Provide sufficient attention to the details in each study – from its conceptualization and execution to its analysis and interpretation – that the empirical results constitute replicable scientific facts upon which one can solidly build. Replicable facts are the precondition of worthwhile scientific theory.

Second, scientific theories are not personal possessions even if they are personal constructions. Theories are not delivered truths to be defended against all who express doubt, they are intellectual structures that we create with disciplined imagination to organize and explain a systematic body of evidence, and to help answer questions and solve problems in a given domain. Your ability to develop a coherent theoretical structure that explains a body of evidence is a measure of your cleverness, not the inherent veracity of the theory. Always respect the data. Play with ideas, feel free to be imaginative with ideas, consider alternative conceptualizations, search for the most useful, comprehensive, generative, parsimonious, and falsifiable formulations you can conceive.

When you have succeeded, do it all over again to develop competing hypotheses. And then construct and perform an empirical test to differentiate the two hypotheses.

Maintain the objectivity and discipline required of rigorous science. A measure of your objectivity is the extent to which you treat confirmatory results with the same scrutiny, skepticism, and search for alternative accounts as you treat unexpected or disconfirmatory results.

For young investigators science can sometimes appear to be a race. The tenure clock is ticking, family obligations may be placed on hold, other labs are closing in on the brass ring you are

striving to grasp, the position or esteem one desires is just ahead if only one can reach it in time. But if a scientific career can be thought of as a race, it is an ultra-marathon event, not a sprint. Enjoy the run and, definitely, cultivate a sense of humor. Be serious and not at all serious about your science, at the same time, all the time.

Easy for someone with tenure to say, but isn't the tenure clock real? Yes and no. The threat of "publish or perish" is a myth. It seems to be a well-kept secret, but not getting tenure at one institution does not mean one's academic options are closed. There is also a first-rate world beyond the walls of academia. Intelligence, objectivity, scholarship, expertise in experimental logic and analytic methods, and skills in oral and written expression are valuable skills, and they are certainly less common per capita outside than inside academia. Every PhD I have known who either did not pursue or did not receive tenure has not only survived but has thrived. Most are paid better and work fewer hours than the average faculty.

Scientists, the story goes, sacrifice fortune for fame. It is helpful to remember that well known psychological scientists are a relative unknown compared to even a second-rate celebrity. Yes, we know who Pavlov is, but remember that many, many more people know and respect Donald Trump than Pavlov. Perhaps the best for which we can reasonably strive is to contribute a comparatively anonymous brick to the temple of science with the recognition that the temple will most likely carry the name of a politician or wealthy benefactor.

As a young scientist, you are part of a larger, remarkable community of scientists, past, present, and future. Integrity in this context is your most precious attribute as a scientist. Given the dearth of external rewards and the superfluity of criticism in academia, it is understandable why the regard of one's peers is cherished. Such regard can be found



in various forms – the acceptance of a paper, the granting of tenure, the receipt of an award, the appointment to an editorial board, the selection of your doctoral student for a faculty appointment, even the simple recognition by others of you by name. Pursue your work for the contribution it can make to human understanding and for the satisfaction of a job well done, not for the adulation of others. You will never be able to get enough of the latter (or get it for long enough), but the supply of the intrinsic rewards are endless and largely under your control. If the pursuit of these rewards ever does come at the cost of the values and ideals that made a career in science appealing in the first place, you may find that science is reduced in your own mind to a cynical and futile game.



Marie Johnston



What advice would you offer to young psychologists?

You can choose to work at the more scientific or the more applied end of the discipline, but whatever you do, ensure high scientific quality and acquire the skills necessary to deliver that quality.

Please identify a moment that changed the course of your career.

Attending a conference where I heard George Stone speak and learned that psychological theory could be applicable to a wide range of health related issues.

Please identify one challenge that health psychology should be addressing, but is not.

How to position itself so that when expertise on 'behaviour' is required psychologists are automatically invited to contribute rather than variable assortments of other disciplines and lay people.

Please identify one journal article that all psychologists should read (not an article that you authored).

Kaplan, R. M. (1990). Behavior as the central outcome in health care. *American Psychologist*, 45(11), 1211.

What is the most important lesson that you have learnt?

That one is always learning – and that it's necessary, useful and enjoyable.

What would you research if you have unlimited money and resources?

The research question: How should public services be developed to maximise health without socio-economic inequalities and within feasible budgets? The methods: This might involve random allocation of whole populations to innovative preventive methods, removal of services that lack an evidence base, infinite follow periods etc. – so I would have to live rather a long time!



Kevin Patrick



Please identify a moment that changed the course of your career.

After graduation from medical school I was not at all certain about what I wanted to specialize in so applied to a one-year internship at my medical school-affiliated hospital. Alas, I did not match to it and was initially devastated. I ended up going to another hospital where I met the first of three key professionals who most shaped my career over my entire professional life. Among other things this set me on the path to study community health and, ultimately, its connection with technology.

Please identify one challenge that health psychology should be addressing, but is not.

I'm not a health psychologist so can't claim to have comprehensive knowledge about what is or isn't being addressed in the field. I would state that all of us need to do more than we are at present to engage in inter- and trans-disciplinary research. The future needs new thinking if we're to solve the major health public health problems of our times.

Please identify one journal article that all psychologists should read (not an article that you authored).

The paper by Michael McGinnis and William Foege in 1993 in JAMA on the actual causes of death in the United States. We so often fall into a disease-focused view of morbidity and this is one of

the most elegant – and first – papers to outline that “causes” are different from “diagnoses”. (JAMA, 270, 2207-2212.

doi:10.1001/jama.1993.03510180077038.)

What is the most important lesson that you have learnt?

All knowledge is fleeting so don't become overconfident in “what you know”.

What advice would you offer to young psychologists?

Don't be afraid to get out of your comfort zone re: meetings you attend, colleagues you ask to collaborate with, and things you read. The best ideas might come from when you are puzzled and asking questions rather than spending time on things you already know.

What would you research if you have unlimited money and resources?

How to build a “smart community” that explores and promotes individual, family, neighborhood and community wide influences on health through the use of multi-layered, multi-scale and dynamic sensing and associated systems.



Aleksandra Luszczynska



Please identify a moment that changed the course of your career.

Joining a research team working in a different country and applying their own approaches to solve problems/issues in the field of health psychology. I have joined Ralf Schwarzer's team at Freie Universität Berlin in Germany. I stayed there for two years first as a research fellow and then as visiting professor. Staying abroad and working with a productive and hospitable team that operates in a different academic system and provides services to a local community was very instrumental and I experienced it as a 'paradigm shift'. I believe that academic mobility offers an opportunity to integrate our own perspective with approaches developed in a different academic and cultural systems. This unique integration might be beneficial for both a visiting scholar and the hosting team as it enables researchers to go beyond typically applied methods and approaches.

Please identify one challenge that health psychology should be addressing, but is not.

A transdisciplinary approach, defined as identifying a problem common to different disciplines, and then creating new conceptual, theoretical, methodological, and translational solutions that integrate and move beyond discipline-specific approaches. Problems solved by health psychology are common with public health,

medicine, physiology, nursing, and information technologies. I believe that a transdisciplinary approach would enable a 'paradigm shift' within health psychology and therefore allow for faster progress in our discipline. A transdisciplinary approach would also help with knowledge transfer from health psychology to other disciplines.

Please identify one journal article that all psychologists should read (not an article that you authored).

Go beyond your usual topics and the usual journals ... and read a book. For example, read 'Kuhn's structure of scientific revolutions at fifty. Reflections on a science classic' edited by Richards and Daston, published in March 2016 by the University of Chicago Press. If you don't take my word for it then read the reviews of this publication in Science and Nature. To me, this book is more exciting to read than the original work by Thomas Kuhn (1962). Honestly, it is more juicy, modern, and putting Kuhn's theory into a context. Kuhn is recognized as one of the most influential modern philosophers of science and the author of the model of stages of scientific revolutions. The book discusses original principles of progress in science. According to Kuhn's

model we need to observe and identify anomalies in our findings, combine them in the 'crisis' of the dominant methods and approaches. The crisis may be then followed by a paradigm shift, with new constructs, theories, and methods. Thus, instead of striving for 'truth' and 'objectivity' a scientific crisis enables us to develop and use new effective approaches to 'successful problem solving' and to offer better 'methods adopted as valid standards within a scientific community'.



What is the most important lesson that you have learnt?

Unreachable goals serve as a regulative principles (in Kant's [1912] sense), guiding our approach towards progress.

What advice would you offer to young psychologists?

From time to time join a new team. Ideally, go abroad and/or join a team using different perspectives, methods, and approaches to the problems you try to solve. Use it as an opportunity for learning how to change the paradigm and achieve novel solutions.

What would you research if you have unlimited money and resources?

I would always suggest to estimate resource requirements. If you are into 'use-inspired basic research' (so-called Pasteur's quadrant, which integrates basic and applied research) or if you are considering some potential applications of your research, then estimate resources (time, money, human and organizational resources) required to achieve a change in health, psychological, or social outcomes. This would lead to finding simple and cost-effective solutions. Obviously, to solve a problem we need to know the mechanisms and the effect sizes of the proposed solutions. However, an estimation of the use of the resources may be equally important.

