

## Editorial:

# The Social and the Cognitive in Professional Interactions: The “Interprofessional Intelligence” Hypothesis

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There is strong support for the hypothesis that humans have evolved specialized social and cognitive skills for accomplishing tasks and exchanging knowledge in cultural groups—coordinating tasks, “reading the mind” of others, communicating with others, learning from others [1]. If this is true, then health professionals are no exception. They are human beings who went through a specific process of socialization, that of becoming a professional—one that implements a system of practices, ideas, and models of reality that give professionals expertise, legitimacy, and credibility to deliver effective healthcare. Although we still need to know more about how the evolved social and cognitive skills influence what makes a novice into a professional, chances are those skills are essential for learning one’s profession in the same way that they are essential for effective interactions with other human beings.

One way to begin expanding our knowledge in this area is to examine how professionals organize their practice along two levels: the social and the cognitive. On the social level, we can examine how professionals organize their work—what they do to achieve a specific purpose and, more generally, how they organize their interactions and relationships both within and across different professions. On the cognitive level, we can examine how professionals organize what they know [2]. This issue of *JRIPE* features articles that explore both levels.

On the social level, Godley and Russell-Mayhew, working in the field of obesity management, ask deceptively simple questions related to the link between professionals’ working relationships (e.g., how many other individuals from other professions do you work with?) and their attitudes toward interprofessional practice [3]. A distinctive merit of this study is the elegant use of a social network approach to data analysis that can give powerful insights into the social ties and working relationships of individuals both within and across professional boundaries.

For D’Eon et al., the best way to organize interprofessional learning seems to be to have students solve problems and, better yet, do it collaboratively with students from different professions [4]. This leads to the idea of Interprofessional Problem Based Learning, or iPBL, and its implementation with a large-scale, compulsory module for HIV/AIDS management involving up to seven different health professions programs. Here the authors report preliminary insights into extending the merits of problem-based learning to an interprofessional context. They also report several lines of research that are worth pursuing, such as the relative contribution of the elements of

the iPBL module to student learning and satisfaction, and the comparative benefits of iPBL to other learning methods.

For Grymonpre et al., interprofessional learning is best organized through an experiential framework [5]. Working with an iterative design process, the authors developed a clinical placement educational program that is reflective of clinical practice in geriatric day hospitals and that promotes social opportunities for the learners and clinicians. Using a quasi-experimental mixed research design, the authors report preliminary findings on the gains in knowledge and team skills of senior pre-licensure learners. They also highlight the need for larger sample sizes through multi-site research to allow for comparisons within and between clinical sites.

On the cognitive level, the articles by Bechard et al. and Proctor et al. provide similar angles on the issue of educating for collaborative practice: the requirement that care delivery professionals have similar understanding of what health and its determinants mean [6,7]. One way to achieve this mutual understanding is through the provision of common theoretical frameworks and language on which everyone would agree. A shared language and a shared set of ideas and beliefs could then provide the basis for the kinds of stories professionals tell about how they practice interprofessionally and what they can do to shape their learning and practice.

Proctor et al. collected data among pre-licensure students from medicine, physical therapy, kinesiology, nursing, and social work to show how modest changes in students' attitudes and beliefs about poverty and health can be achieved through a brief interprofessional, community-based educational experience.

For Bechard et al., the International Classification of Functioning, Disability and Health is an ideal framework that can provide a common language about health and disability among healthcare professionals. Although they collected data on a multidisciplinary group of medical students in a Canadian university, the authors argue well for the relevance of a holistic biopsychosocial perspective on health and disability for the success of interprofessional learning and practice—a tantalizing line of inquiry that is worth pursuing as team-based models of care continue to evolve.

Although we are still a long way before we could fully test an evolutionary socio-cognitive theory of professional development and interprofessional learning, we can put the social and cognitive levels together into what we might call an "interprofessional intelligence" hypothesis: effective interactions among health professionals, guided by specifically evolved social and cognitive skills, contribute to the acquisition of a shared imagination. (Proctor et al. call this "an inequality imagination"; Bechard et al. suggest it is a common perception of what health and disability mean.) Through a selection process that contributes to a shared repertoire of tools and products, such interactions also lead to the development of effective ways of organizing work among professionals—cultivating social ties, solving problems collectively, sharing learning experiences. The selection process is one of collective "sense making" by which knowledge and meanings are negotiated among professionals and subsequently standardized into practice, and where effective strategies continue to be used and ineffective ones are weeded out [8,9]. This hypothesis might help account for the differences in professional cultures, each operating with distinctive sets of artifacts, practices, and

institutions. Professional development—the transition from novice to professional—becomes in this light a matter of learning to use those artifacts and participate in those practices based on evolved social-cognitive skills of social learning, communication, and “theory of mind” [10].

The interdependence between the cognitive and social levels of human interactions is as natural as that between knowing and doing. Critical advances in interprofessional learning theory and practice may depend on harnessing that interdependence. A shared set of ideas for understanding interprofessional practice—“an interprofessional imagination”—can suggest avenues for dealing with practical interprofessional learning situations. Theoreticians also require key information and facts from practitioners regarding the most effective ways to organize interprofessional learning and practice, which in turn can lead to new ideas for handling complex situations. Activities that can foster a strong sense of interdependence between these two levels can thus serve as a kind of “bootstrap” for the development of a mindful, intelligent practice among professionals. Such a practice holds the promise of fresh possibilities for empirical research and new perspectives on the processes that constitute interprofessional education.

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