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Abstract of the keynote lecture "Critical thinking about the relationship between science and the profession"

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Critical Physiotherapy Network blogpost

The relationship between science and professions can be described as fundamentally tense (Stichweh 1994). While science tests the validity of theories and explanatory models and thereby assumes an "openness and vagueness of knowledge" (Ludwig 2015: 19), the profession expects secure knowledge to safeguard its practice of action. At the same time, a separation into "theory" on the one hand and "practice" on the other is hardly expedient. Because also " [...] the so-called "practitioners" [...] use theories, everyday theories, which they substantiate their actions" (Ludwig 2015: 20). So this is a kind of applied, intrinsic theory that guides action. On the other hand, there is the theory of science, which claims to be objective, widely valid and empirically verifiable.

This model of difference between science and professions means that a successful relationship between the two systems is not inevitable. Rather, it must be permanently established through elaborate processes of exchange and negotiation (Beck/Bonß 1989). This is also desired by both sides: science would like to see its findings taken into account in the practice (keyword evidence-based practice), the practice expects, as mentioned above, secured knowledge in order to realise the best possible therapy for the patients according to ethical principles. The goal of a good science-profession relationship is difficult to achieve.

Numerous philosophers of science have dealt with this phenomenon (e.g. Fleck 1935, Kuhn 1974, Parsons 1968, Popper 1934, Stichweh 1994, Luhmann 1981, 1992) and produce sometimes very controversial basic assumptions. One thing they all have in common is the question of how knowledge is created and how it finds its way into society? A central, if not exhaustive, answer to this question is that knowledge is, on the one hand, to be regarded as processual, i.e. it develops and changes over time (historicity of knowledge). At the same time, knowledge is always bound to a zeitgeist, i.e. not free from the influence of "modern" social and cultural beliefs (contextuality of knowledge). Schools of thought and styles of thought (Fleck) or paradigms (Kuhn) are the result.

The processes of knowledge that have grown out of history and have been shaped by the spirit of the times have a certain inertia in the face of critical submissions and changes. On the one hand, this results from the assumption that what has once been recognised by science is regarded as probably valid until it is disproved. On the other hand, there is always a group of people who benefit ideally or materially from contemporary conditions. For example, in the current empiricism of clinical research, which is dominated by highly complex statistics, there is hardly any promotion and acceptance of

qualitative-empirical findings. However, these could contribute to improving the understanding of complex disease processes in times of chronification and multimorbidity. This, in turn, could lead to the development of treatment strategies that do not centrally involve hospitalisation, surgical intervention and multimedication, but rather offer interprofessional and lifeworld-related sustainable solutions.

The aforementioned inertia exists both in science and in the profession, albeit with different frameworks. While science is struggling internally with paradigms, the practice of action is dealing with relatively change-resistant concepts and methods. In addition, there are social frameworks on both sides that are often very powerful, such as material constraints, legal and political decisions. And then the two are supposed to relate to each other?

The proposed model for a science-profession-relationship in physiotherapy (Fig.) offers an access for theoretical and empirical considerations of individual parts of the relationship construct. In this way, all "bridges" can be analysed in relation to their role in shaping the relationship. Two key areas for an actual relationship reality are found in the area of care and in the area of professional qualification (education and training). Here, science and profession should ideally come together to ultimately ensure optimal care for patients. However, this ideal must be actively achieved.

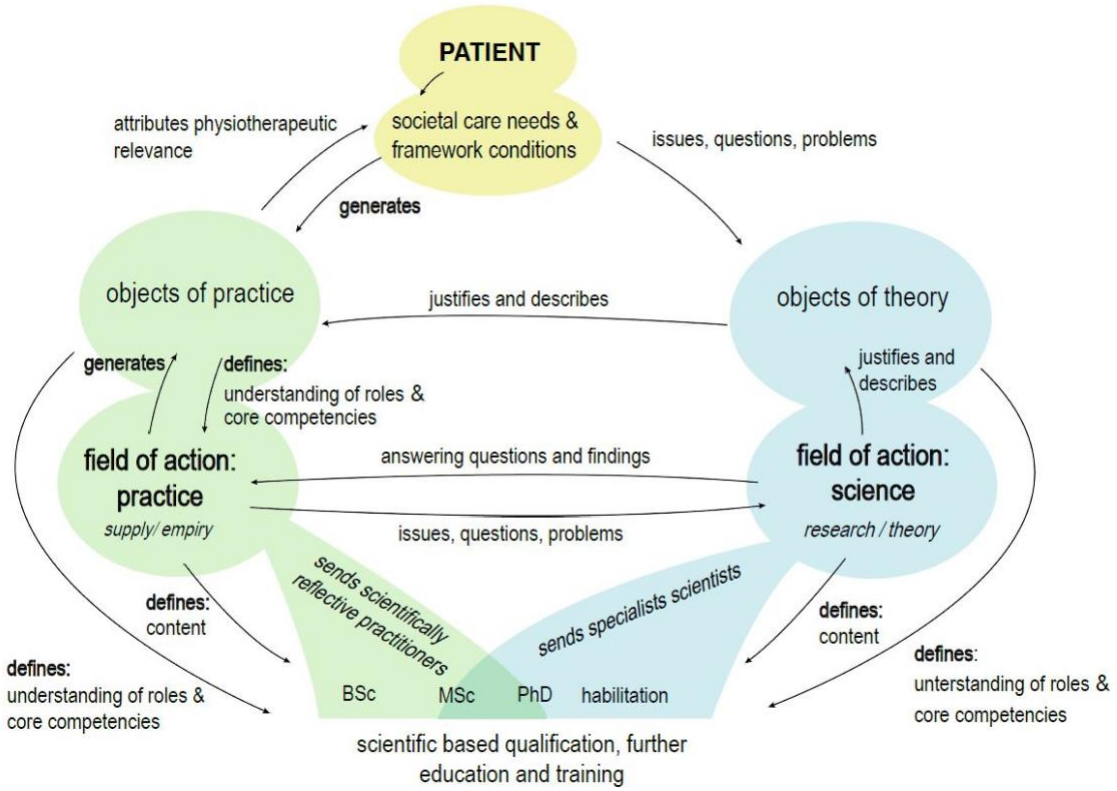

Figure: Model of Theory-Practice-Relationship in Physiotherapy (Richter 2016, 2018)

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Robert Richter is physiotherapist and medical educator and has since 2017 the professorship for movement therapy at Furtwangen University (Germany). His research and teaching focuses are on interprofessional teaching and learning, theory-practice relationship in physiotherapy, therapist-patient relationship and more recently environmental physiotherapy. His practice focuses on musculoskeletal and pulmonary disorders.