Paradigms, emperor’s clothes syndrome, and hidden curriculum: how do they affect joint, bone, and spine diseases?

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1. Paradigm

“Paradigm” is derived from a Greek word meaning “model” or “example”, which in turn comes from a verb that means “to show”. As a mental construct, a paradigm is an accepted rule that is interiorized as the norm by a scientific community at a point of its history. This norm delimits fields—and questions pertaining to those fields—that the scientific community deems worthy of investigation. Philosophers, such as the epistemologist and science historian Thomas Samuel Kuhn, define “paradigm” as an exemplar, a model worthy of imitation because it illustrates a rule. A paradigm is accepted by a scientific community that is defined by specific group activities, for instance conventions, lectures, and publications. Several paradigms pertaining to the same topic may co-exist at a given point in time, occasionally conflicting with, or ignoring, each other.

Similar to all theories, a paradigm must face the test of time. New knowledge may refute a paradigm that was securely anchored in the scientific mind. However, Karl Popper pointed out that a paradigm shown to be wrong is not discarded until another paradigm emerges to take its place. Continued use of paradigms that are known to be wrong was described by Gross [1] under the name “emperor’s clothes syndrome”. The emperor (see below) does not admit that he is naked until he is wrapped in a heavy mantle. Thus, a paradigm reflects the role for the cultural environment in making a sign acceptable, irrespective of whether the sign is true or false. Elevating a false sign to the rank of paradigm, and therefore dogma, has consequences that may range from negligible to devastating.

2. Emperor’s clothes syndrome

Emperor’s clothes syndrome, described by Gross [1], takes its name from the well-known tale by Hans Christian Andersen (1835). In the story, two swindlers tell an emperor they can weave uncommonly fine fabric that is invisible to people who are stupid or unfit for their office. Of course, no such fabric exists. The emperor asks the two men to weave fabric for a suit then sends his minister to assess their progress. The minister is unwilling to admit that he can see no fabric, as he feels he is intelligent and fit for his office. He therefore reports to the emperor that the fabric is magnificent. The emperor has the same behavior when he goes to see for himself. The two swindlers are told to use the fabric for a suit that the emperor will wear to lead a procession. They pretend to dress him in the new clothes, the whole retinue praises the suit, and the procession begins. After a while, a child in the crowd exclaims: “But he has nothing on!” The emperor knows that the child is right but nevertheless finishes the procession.

The tale by Andersen could be transposed as follows: a prominent physician (the emperor) finds a clinical sign (the suit), and his attendants (the retinue) agree. However, the sign does not exist: the emperor has nothing on. In Andersen’s tale, the emperor continues to pretend that his suit is magnificent, even after he knows that there is no suit at all. This phenomenon was described by Karl Popper more than a century later. In the story, the paradigm “invisible but real suit” is accepted by the retinue and emperor. The paradigm collapses when an innocent child cries “He has nothing on!” but the emperor (and therefore his retinue) continue the pretense (probably until he obtains another suit) and walks on, clothed in his own dignity.

3. The hidden curriculum

The term “hidden curriculum” is used to designate the unintended transmission of beliefs and behaviors, as opposed to the intentional teaching of knowledge and skills. The hidden curri-
The hidden curriculum is of utmost interest for medical education. It is the set of messages—narratives, discourses, behaviors—transmitted to students and teachers in various countries and at various times. A growing number of studies suggests that the hidden curriculum is far more significant than formal teaching and that it endangers medical practice. It is possible to determine professional identity without the more subtle and less well recognized influence of the hidden curriculum—explanations.

Since the seminal paper by Hafferty and Franks [2], the hidden curriculum has received considerable attention from educators. Teaching institutions must seek to achieve full agreement between their formal curriculum and their hidden curriculum. It can be hoped that attention to the hidden curriculum will end the schizophrenia of the teacher or professional. Nevertheless, students and teachers in various countries and at various times have noticed—and continue to notice—divergences between the formal curriculum and the hidden curriculum, between the contents of the lecture and the information gleaned by observing professionals at work, although no dichotomized definition of truth can be given. The emperor’s clothes metaphor may help to close the gap between the content of formal teaching and the lasting imprint made on students by exposure to the behaviors of teachers during academic and patient-centered activities. Reality cannot always be equated with truth. Paradigms that have been found wrong, i.e. emperor’s clothes syndrome, can be encountered both in the formal curriculum and in the hidden curriculum. The scope of the hidden curriculum during patient-centered activities must be recognized, as it is fairly vast in medicine, across the range of practice modalities. Teaching delivered in hospital departments affects students and physicians in training, albeit in ways that are difficult to detect. It has been suggested that exposure to real-life clinical work may exert a greater influence than formal teaching [3–5].

Teaching medical ethics as part of the hidden curriculum may lead to emperor’s clothes syndrome. Do future physicians learn about medical ethics in the amphitheater or by watching their teachers interact with patients? Hafferty and Franks [2] used the teaching of ethics to illustrate the complex interactions between the formal curriculum and the hidden curriculum. Increased attention to the formal teaching of ethics is considered desirable by many medical schools. However, although formal courses can teach skills that are relevant to medical ethics (e.g. recognizing the presence of ethical problems, ethical reasoning, understanding of the language and concepts of ethics), they have no lasting effect on future professionals. Formal teaching does not ensure ethical behavior. Studies conducted in France and in North America have established that ethical issues in hospital departments are given less and less attention by students from year to year [3]. In an attempt to explain this finding, several factors were investigated, including the concept that medical ethics is a set of paradigms. Similar to emperor’s clothes syndrome, the notion/paradigm that learning involves mimicking continues to prevail, as there is no new evidence to replace it. However, knowledge and skills fail to determine professional identity without the more subtle and less well recognized influence of the hidden curriculum [2]. At the intersection between the two concepts (hidden curriculum and emperor’s clothes syndrome), adequate teaching of medical ethics requires that the emperor and his entire retinue acknowledge the major role for the hidden curriculum in effective training. This fact underlies the development of the Charter for Medical School Ethics (Charte de l’éthique des Facultés de médecine, CEFM) presented by the International Conference of French-Speaking Deans of Medical Schools (Conférence Internationale des Doyens de Facultés de Médecine d’Expression Française, CIDMEF) to the international medical community in 2004 [6,7]. To exert an active influence, the charter needs to be disseminated and put into effect in the specific settings that characterize each medical specialty.

4. The situation in joint, bone, and spine diseases

Paradigms decrease the need for memory work by consecrating tightly-woven formulas that are clothed in a cloak of credibility. The binary mode is easy and comfortable and may therefore appeal to physicians for their practice. References to Andersen’s tale abound in the medical literature. Does emperor’s clothes syndrome occur within the sphere of rheumatology and its interfaces with other specialties such as medical imaging? An example is the part played by the formal teaching of facet joint injections at medical school and the clinical use of these injections in rheumatology and radiology. What do residents training to be rheumatologists or radiologists think of the evidence that our practice is built on? This example is not intended to be censorious or to impose a specific solution (“clothes”). The emperor’s clothes syndrome concept is helpful only if combined with collective speech—which in turns leads to awareness—without which the new “suit of clothes” will never be found.

Our goal is to ask questions that will encourage a broad debate. Does our formal teaching in the amphitheater always dovetail harmoniously with the patient-centered teaching that follows? Does the observation made by Karl Popper (a paradigm does not disappear when it is found to be wrong but when a substitute is developed) apply to everyday rheumatologic practice? Do diagnostic, nosologic, and therapeutic paradigms disappear as soon as they become obsolete in the field of joint, bone, and spine disease, before alternatives emerge in our clinical practice? Is not it time to talk “clothes” in the empire of rheumatology? To answer these questions, a debate must emerge: such is the objective of this editorial.

References

Charles Masson*
Service de Rhumatologie, CHU d’Angers,
49933 Angers cedex 9, France
E-mail address: ChMasson@chu-angers.fr
(C. Masson).

Lucie Brazeau-Lamontagne
Département de Radiologie, Centre hospitalier universitaire et faculté de médecine et des sciences de la santé de Sherbrooke, Québec, Canada J1H 5N4
E-mail address: lucie.brazeau@usherbrooke.ca
(L. Brazeau-Lamontagne).

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*Corresponding author.