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LETTER TO THE EDITOR

A DEFINITION OF DISABILITY EMPHASIZING THE INTERACTION BETWEEN INDIVIDUAL AND SOCIAL ASPECTS THAT EXISTED AMONG SCANDINAVIAN PRECURSORS OF REHABILITATION MEDICINE AS EARLY AS 1912

Sir,

In a series of papers on rehabilitation medicine and the International Classification of Functioning, Disability and Health (ICF) published in the *Journal of Rehabilitation Medicine*, readers were invited to comment on this issue (1). Because many recent studies discuss the development of models of disability and relate this to different assumptions about earlier models of disability (2, 3), we report here on the history of ideas regarding such models. Discussions preceding the introduction of the ICF stressed the importance of the interaction between individual and social aspects of disability (2, 4). A definition of disability as an individual's deviation from bio-medical norms of structure or function is called "the medical model" of disability, while, somewhat simplified, a definition that emphasizes social aspects is called a "social", "environmental" or "interactive" model (2–4). The origin of the recognition of the social aspect has been attributed to social scientists of the 1960s, and such models have been described as the opposite of a medical model of disability. According to Shakespeare (3) "the medical model" of disability has become a strong symbol for all that was wrong with traditional conceptions of disability. However, he commented that medical textbooks do not subscribe to the so-called medical model of disability, and that the American Medical Association was in fact differentiating between impairment and disability related to the interaction with the economic and social environment as far back as 1958. Although there has been an extensive discussion, there is a lack of historical research on models of disability and it has not been clarified as to how disability was actually defined when rehabilitation became a part of medicine. In addition, the risk of neglecting sources from cultures outside the English-speaking areas, e.g. documents related to the early Scandinavian relational understanding of disability, has been discussed (3).

A pilot study on the medical treatment of disability in Sweden, from the 1700s until the introduction of the ICF, has shown that the Scandinavian textbooks on medical rehabilitation from the 1960s and 1970s were quite clear about the importance of the social aspects of disability (5). In addition, the pilot study showed that the orthopaedic surgeon Patrik Haglund, who was an influential Scandinavian representative of the care of people with physical disabilities and a forerunner of rehabilitation medicine, discussed such aspects as early as 1912 (6). According to Stiker (7), the early Scandinavian orthopaedic approach to disability was comprehensive and very close to what was thought to have been developed in terms of rehabilitation after the First World War. Thus, a further study of the Haglund approach (6) has been undertaken in order to explore an original medical definition of disability.

A copy of the original publication (6) was retrieved at the Swedish Royal Library. The text was read repeatedly, alternating between open readings and those seeking confirmation of the interpretation. The Swedish text was interpreted in ordinary English of today, avoiding anachronisms as far as possible. Swedish terms in the original text are denoted below in italics in parentheses, and the corresponding English terms in italics. Following the Swedish text with regard to its references to ordinary Swedish language, the English term "physical disability" was used with a general meaning, but also with a more specific meaning in the explication of different aspects of physical disability. The co-authors, a historian and an occupational therapist, scrutinized the interpretation of the first author by comparing it with the original text.

The original Swedish medical definition of disability from 1912 emphasized the interaction between individual and social aspects: the text makes a distinction between 3 aspects of *physical disability (vanförhet)*. Firstly, the concept of *bodily defect (lyte)* is distinguished from the concept of *physical disability (vanförhet)*. The former relates more to the deformity, exemplified by malformations and paralyses, while the latter deals more with the inability to perform certain tasks necessary for the normal process of life, work as well as the simplest tasks. This distinction relates to the traditional meaning of the terms in ordinary Swedish. Secondly, the concept of physical disability as such is distinguished from *physically disabled in a social sense (vanför i social bemärkelse)*. According to the text, the latter distinction is rarely recognized in everyday language. The meaning of physical disability in a social sense, according to Haglund, is related to the restriction implying the individual's need for special societal support. In order to explain the need for such societal support, the relationship between the 3 aspects of physical disability mentioned is discussed. Firstly, the text gives two examples of situations in which an individual may not need special societal support. One is the case in which a person has only a minor physical disability, which has no influence on economic self-sufficiency in adulthood. The other is the case in which there is a major physical disability, but the economic and social situation provides opportunities for the individual to receive the best treatment, education, and external help devices. Secondly, the text describes the situation in which the concept of *physically disabled in a social sense* is used: insurmountable difficulties arise because of either the degree of physical disability and/or the economic situation during different periods of life. To explain this concept,

the text highlights the *interaction (växelverkan, samverkan)* between, on the one hand, the bodily defect and the physical disability *per se*, and on the other hand, *the social and economic situation (den sociala och ekonomiska situationen)*. The text concludes that the distinctions provide a social terminology by which the concepts of physical disability acquire special meanings in comparison with ordinary language. The relationship between the various aspects of physical disability is discussed in terms of concepts, definitions, distinctions and meanings, without statements about causal directions and without any schematic illustration.

The described text is a part of a booklet about physical disability and the care of people with physical disabilities written by Haglund (6) and published by the Central Committee of the Swedish Institutions for the Care of the Physically Disabled. In the introduction it is argued that individuals who are affected by severe physical disabilities need special societal management similar to that given to the blind, deaf, and mentally retarded. After discussion of the concept of physical disability, the text gives several examples of bodily defects, malformations and paralyses that may constitute physical disability and describes congenital conditions, diseases, and accidents as causes of such conditions. Finally, there is a discussion about how to help people with physical disabilities, in which orthopaedic interventions are advocated as a first step toward acquiring independent ambulation. The second step, vocational training, should lead to gaining economic self-sufficiency. The complexity of such care, the need for multi-professional interaction, and the development of specialized institutions are discussed.

In emphasizing the interaction between individual and social aspects, this old definition of disability (6) is quite different from the so-called medical model. Rather, it exhibits interesting similarities to the ICF model (4), which is used for conceptual descriptions of rehabilitation medicine (1). Although historical comparisons are not easy, the concept *bodily defect* may be compared to impairment of body function and structure, *physical disability as such* to the individual perspective of activity limitation, and *physically disabled in a social sense* to the social perspective of participation restriction. The text (6) makes an explicit statement about the importance of *the social and economic situation*, which may be compared to the ICF concept of environmental factors.

Although concepts may differ over time, and a detailed comparison is not an objective of this study, the case examples make the general reasoning about *interaction* clear: Haglund's first case example may be compared to the first case example of Annex 4 of the ICF (Impairment leading to no limitation in capacity and no problem in performance), while Haglund's second and third case examples may be compared to the 2 situations of the third case example of the ICF (Impairment leading to limitations in capacity and, depending on circumstance, to problems or no problems in performance).

Notably, the text by Haglund does not express any *a priori* assumptions about causal directions among the various aspects of disability. The text deals with the care of people with physical disabilities, but their situation is compared to groups with other disabilities. Thus, a reasonable interpretation is that the conceptual distinctions were assumed to be relevant to different disabilities that were recognized at that time. Geographically and chronologically, the interaction concept described by Haglund in 1912 is a probable influence on the Scandinavian relational understanding of disability of the 1960s, which has been discussed as a possible influence on recent interactional models (3). The results support the reasoning by Shakespeare about a need to introduce historical studies as well as different cultural perspectives into the discussions about the development of models of disability (3). Also, it supports his argument that a concept of disability that does not recognize the social aspect should not be called the "medical model", but more properly an "individual model" of disability.

In conclusion, a definition of disability emphasizing the interaction between individual and social aspects existed among Scandinavian precursors of rehabilitation medicine as early as 1912. This finding challenges present conceptions that interactive models of disability were invented in approximately the 1960s. The described definition from 1912 is a probable influence on the Scandinavian relational understanding of disability of the 1960s, which has been discussed as a possible influence on recent interactional models.

REFERENCES

1. Stucki G, Melvin J. The International Classification of Functioning, Disability and Health: a unifying model for the conceptual description of physical and rehabilitation medicine. J Rehabil Med 2007; 39: 286–292.
2. Bickenbach JE, Chatterji S, Badley EM, Ustun TB. Models of disablement, universalism and the International Classification of Impairments, Disabilities and Handicaps. Soc Sci Med 1999; 48: 1173–1187.
3. Shakespeare T. Disability rights and wrongs. London: Routledge; 2006.
4. World Health Organization. International Classification of Functioning, Disability and Health: ICF. Geneva: WHO; 2001.
5. Thyberg M. [Medical treatment of disability]. In: Förhammar S, Nelson MC, editors. [Disability in a historical perspective]. Lund: Studentlitteratur; 2004, p. 125–144 (in Swedish).
6. Haglund P. [On physical disability and the care of people with physical disabilities]. Stockholm: Svenska vanföreanstalternas centralkommitté; 1912 (in Swedish).
7. Stiker H–J. A history of disability. Ann Arbor: The University of Michigan Press; 1999.

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Mikael Thyberg, MD, PhD[1,4], Marie C. Nelson, PhD[2,4] and Ingrid Thyberg, OT, PhD[3]*

From the [1]Rehabilitation Medicine and [3]Rheumatology, Department of Clinical and Experimental Medicine, [2]History, Department for Studies of Social Change and Culture, and the [4]Swedish Institute for Disability Research, Linköping University, SE-58185 Linköping, Sweden.

*E-mail: mikael.thyberg@lio.se