

## Commentary I Sol Levine's legacy

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Time is important in influencing a scientist's direction of work. At an early developmental stage of a scientific discipline outstanding scholars set the frame of research and define the central topics whereas, at a later stage, systematic empirical studies and in-depth explorations become major tasks. Sol Levine was one of the remarkable scientists of the early stage of medical sociology. He has defined several of its major areas of research. One such area concerns the study of associations of societal structures and processes with health as mediated by psychobiologic stress responses (Levine & Scotch 1970). The sociological analysis of quality-of-life in health, disease, and health care was another major topic introduced by Levine and his close colleagues (Levine 1987; Croog & Levine 1977). Interestingly, these two concerns dominate the content of his interview given at the age of 73. This interview, in my view, contains three core messages.

First, following René Dubos (1969) Sol Levine conceptualises health in relational terms. The human being is healthy to the extent that she or he maintains a sense of agency and relatedness. By agency he understands the ability of pursuing one's own goals or one's own "style". Relatedness points to the quality of social exchange with significant others. Thus, people may be healthy to a significant extent even if physical illness or disability affects their life. Alternatively, an unhealthy, repressive social environment reduces health even among those who are free from medically diagnosed illness.

In particular, Sol elucidates the "salutogenic" potential of interpersonal happiness. He describes it as an egalitarian, reciprocal relationship characterised by empathy, respect, and absence of utility. The experience of happiness enhances health through positive emotions, especially love and esteem, and their motivational, cognitive and neuroendocrine/immune consequences. Conversely, competition,

power and unfair treatment resulting from unfavourable social exchange elicit stressful experience and promote disease. At least part of social inequalities in health can be explained by these differential socio-emotional dynamics (see e.g., Siegrist 2000).

Levine's approach to health seems untimely in view of the powerful paradigm of molecular biology that dominates current medical thinking about health and disease. Yet, a growing body of scientific evidence supports the notion of human health as a relational or systemic phenomenon where bi-directional pathways between social environment, brain and bodily systems play a crucial role (see Weiner 1992). Sol Levine's approach to health, therefore, is seminal and deserves further systematic exploration.

A second message of the interview concerns human ageing as reflected in Sol's comments on his own biography. Successful ageing, according to him, essentially means the ability to realise a higher degree of autonomy. It means becoming less dependent on power and achievement and being able to define and direct one's own genuine interests. Moreover, successful ageing means to be able to contribute to "something bigger than yourself", to be connected with reality, either mundane or spiritual, that transcends your own life.

In fact, recent research on healthy ageing has underlined the importance of favourable experience of self-efficacy (as achieved through autonomy and creativity), of self-esteem (as experienced through reward and appreciation from significant others), and of belonging or relatedness. Successful ageing also depends on the ability of remaining open-minded and challenged in one's thinking and learning, as well as on the ability of fighting against routine and lack of concern (see Baltes & Singer 2001). By his own way of living Sol Levine has demonstrated how to reconcile activity and relaxation, rationality and meditation, work and love.

Here appears his third message given in the interview: intellectual responsibility. As scientists living in a rather privileged world we have the responsibility of making best use of our expertise and knowledge. Sol's concern about political extremism, terrorism and hostility, his concern about human destruction of the ecology and about human threat to future life on earth illustrates this case in an im-

pressive way. Given these threats are we still able and willing to "shake the world into some attention"? Are we really caring for a further humanisation of life to the best of our knowledge?

In summary, Sol Levine's legacy is inspiring and challenging both at the intellectual and moral level. We have lost a seminal scientist and a wonderful colleague.

**Johannes Siegrist**

#### References

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