Author's response to reviews

Title: Is US Health Care an Appropriate System? A strategic perspective from systems science.

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Author's response to reviews:

Below please find most recent additions/changes to my manuscript as requested by Reviewer 2. The changes are listed as "Added:" and follow the reviewer's comments.

Reviewer's report
Title: Is US Healthcare an Appropriate System? A strategic perspective from systems science.
Version: 2 Date: 16 November 2008
Reviewer number: 2
Reviewer's report:
Major compulsory revisions
All addressed though the author may wish to strengthen his arguments with regard to my previous 2nd point, which was:
'Why it is appropriate to use this model (or metaphor) based on a biological system to diagnose another, social, system, as is done in this paper. ..... In particular the author might wish to address the objection that social systems such as healthcare systems are fundamentally different from biological systems because humans have intention and knowledge. Such a difference might be thought to preclude comparison.'

The author has addressed this, but he might wish to consider the following.
2a. The more difficult issue is that of intention. As understood in philosophical discussion of human action, to have an intention is to be in a state of mind that is favourably directed towards bringing about (or maintaining, or avoiding) some state of affairs. In this interpretation it is a state of mind that is the source of an intention - a mental rather than a physical state. But, under this interpretation, it is not possible to argue that ‘the capacity for intent also seems to be present on a basic level in all biologic systems differentiated only by the source of the intent
(e.g. metabolic, hormonal, emotional etc)..... without also accepting the position that all mental states are intelligibly reducible to physical states. Is this what the author has in mind, or is he working from some other interpretation of intention?

Added:

The capacity for intent has been traditionally seen as only human mental function rather than a complex process within interconnected physical matrix. Most known mental functions do seem to have physical substrate resonance within the central nervous system and its connections. Our thoughts, which can be seen as activation of the frontal cortex, are often preceded by hypothalamic activity which provides an emotion-activated filter to our final thought product. From this point of view, mental and physical processes, in relationship to our thoughts, seem to have common activation pathways. As the debate continues, what is often referred to as a mental state actually reflects the amalgamation of genetic predispositions, epigenetic/cultural influences, sensory inputs, and individual’s operational paradigms processed through emotional filters. Health care, as a system, can be seen as pooled individuals, including consumers, providers, payers, legislators, etc., who are all subject to this complex process of intent creation and knowledge integration within their limited and delimited boundaries. Considering this framework could allow a comparison of a biologic system, the human body, with the existing system of health care. As a consequence, the massive impact of the behavioral and lifestyle choices on all major diseases and all-cause mortality can be viewed in more focused relevance to the existing body of knowledge regarding biology, organizations, and systems. [17]

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…also seems to be present on a basic level in all biologic systems differentiated only by the source of the intent (metabolic, hormonal, emotional, etc.), the pathways of expression, and the execution of controls. The impact of knowledge also seems to be open to debate because the capacity for knowledge is generally restricted only to humans. Indeed, the aptitude exists there, by defining knowledge as the ability to integrate information into the “larger picture” of existence. The reality, however, is that this function comes into play only in a small percentage of people on a daily basis or how else would one explain the fact that so much knowledge exists about human health and disease and so little is incorporated into the daily activities? The behavioral and lifestyle choices have massive impact on all major diseases and all-cause mortality irrespective of the existence of knowledge.

2b. The author argues that the capacity of humanity to use knowledge is limited —‘this function comes into play only in a small percentage of people on a daily basis’. While this is true and explains widespread failure to make appropriate behavioural and lifestyle choices, it also suggests that appropriate knowledge is available, even if only used by a few. But is this the case? There is a stronger argument based on the limitations of human knowledge per se, i.e. that we must
all act all the time in conditions of uncertainty in which there can never be a complete understanding of all the processes, factors and relationships involved, and therefore of all the possible consequences. Knowing when and how to act becomes a matter of judgement and, as such, is fallible.

Added:

All existing knowledge, including the need for differentiating quantifiable risk from uncertainty, is imperfect and continues to evolve; some changes are continuous, while others occur in various leaps of timeframe and depth of understanding. Some knowledge, however, has been reasonably constant for extended periods of human existence even though, the science behind it has changed. For example, to live in accordance with day/night and seasonal cycles has been intuitively and empirically felt by people to be positive, likely starting from the early days of our existence. But, it was not until relatively recently that science has documented the health benefits of living congruently with these cycles as well as pointing to the negative impact of living within prolonged cycle incongruence. Science has also elucidated biologic changes of similar circadian and seasonal oscillations and their relationships to health within the animal kingdom giving further support to the feasibility of biologic and social systems comparison.

Minor essential revisions
These have been addressed
Discretionary revisions
These have been addressed
The author may wish to note that reference 8 is repeated at reference 17
Ref 17 deleted and order of references adjusted
Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Acceptable
Statistical review: No, the manuscript does not need to be seen by a statistician.