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Commentary

Governance of Health Systems

Comment on "A Network Based Theory of Health Systems and Cycles of Well-Being"

Karl Blanchet*

Department of Clinical Research, London School of Hygiene and Tropical Medicine, London, UK

Abstract

Health systems research aims to understand the governance of health systems (i.e. how health systems function and perform and how their actors interact with each other). This can be achieved by applying innovative methodologies and concepts that are going to capture the complexity and dynamics of health systems when they are affected by shocks. The capacity of health systems to adapt to shocks (i.e. the resilience of health systems) is a new area of investigation. Social network analysis is a great avenue that can help measure the properties of systems and analyse the relationships between its actors and between the structure of a health system and the performance of a health system. A new conceptual framework is presented to define the governance of health systems using a resilience perspective.

Keywords

Health Systems, Social Network Analysis, Governance, Resilience

The paper written by Michael Grant Rhodes introduces a series of themes that are essential in innovative health system research: the dynamics of system, resilience of systems and the use of social network analysis (SNA) in health systems research (1).

In the field of international health, the dominant approach has been equilibrium thinking which consist of implementing similar and standard programmes in different countries as illustrated by the World Health Organization (WHO) strategy "Health for All" (2). Equilibrium thinking was translated into the rapid 'scaling-up' of pilot interventions, assuming that the success of small-scale projects can be generalised to large-scale programmes (3). The planning of this type of intervention is based on the assumption that all variables, including context and actors, remain unchanged during the entire implementation period (usually three or four years). Hence the generalised use of indicators, linear planning processes and rigid planning tools (for example, logical frameworks) which have been applied by most international donor agencies and non-governmental organisations. The assumption of contextual stability is questionable considering the rapid changes in the environment which modify our social networks and create new health challenges in a more globalised world, such as HIV/AIDS,

pollution-related disasters or Avian Influenza (4). Past and current health strategies have been judged inadequate for highly dynamic socio-ecological systems and contexts (5). As suggested by Michael Grant Rhodes, New thinking on complexity and systems is needed to understand complex phenomena, analyse individuals' behaviour, cooperation relationships and dynamics between groups (6–8).

As Grant pointed out, the current frameworks and definitions on health system do not really reflect the interactions between actors and the ongoing adaptations within systems in response to the changing environment. If one looks at the applications generated by these frameworks, one notes that this was a clear response to the increasing demand from international donors for better accountability (9), and the need for appropriate health system performance assessment tools and methods (10). The current WHO definition of a health system was also perceived by some as being a constraining framework which restricted health policy makers to a normative and linear understanding of health systems, and prevented them from searching for innovative and alternative solutions to current complex global health needs and problems (11–13). In a globalised world, defining a health system has become more and more challenging due to the multiplicity of actors intervening on different scales, and the increasing interactions between global health policies and local health systems. Systems are not abstract entities. Because human actions dominate socio-ecological systems, the adaptability of such systems is mainly a function of the actions and decisions taken by individuals, networks and groups managing these systems (14,15). In other words, the resilience of systems closely relies on the adaptive capacities of actors to respond to stresses and shocks (16). Dynamic systems have various coping mechanisms depending on the nature of events or crises that affect health systems, as referred by Rhodes. In order to distinguish the types of events that affect dynamic systems, Bloom *et al.* proposed to classify events or crises that affect systems into two different groups: (i) shocks (transient disruptions), and (ii) stresses (enduring pressures) (5). Shocks are atypical and short-term interruptions to the 'normal' pattern of development (e.g. natural disasters, wars, debt) (17–19), whereas stresses are effects that play out over a far longer time-

***Corresponding author:** Karl Blanchet; Email: Karl.blanchet@lshtm.ac.uk

span than established policies can generally cover (5). Streefland showed that resilience is a key property of systems (20). Streefland described resilience as a permanent transformation and a process of contextualisation and adaptation that is linked to processes of survival and transformation (21,22). Resilience is a measure of the amount of change a system can experience whilst still maintaining the same controls on structure and function (21–23). This definition portrays resilience as a multidimensional and dynamic process (24). Health systems researchers need to develop tools to measure the level of resilience of health systems.

In health systems research, networks have implicitly been at the heart of health systems (25,26). In their own definition of a health system, Kohn *et al.* made even more explicit how social networks play a crucial role (27). They saw a health system as a network of actors who aimed to provide health care: "In health care, a system can be an integrated delivery system, a centrally owned multihospital system, or a virtual system comprised of many different partners over a wide geographical area" (27). The field of SNA provides an avenue for analysing and comparing formal and informal information flows in a system (28). Although SNA and health care have long been interconnected, SNA has never been applied to health systems research in low- and middle-income countries, which still remains a nascent field of investigation. SNA has proven, in other areas, to be helpful in understanding the nature of relations between actors within a system and how these relationships influence the structure of a system (29,30). Although applying SNA in systems research is not without its challenges, such as capturing the dynamics of systems and the effects of cross-scale events, innovative approaches have been introduced combining social network theories and other approaches, and can potentially generate new knowledge when applied to health systems (31,32).

To summarise these ideas on governance of systems, Lebel *et al.* proposed a conceptual framework to describe the main characteristics of "good" governance of social-ecological systems (33). This conceptual framework was adapted to be relevant to health systems. The "good" governance of health systems in relation to resilience is characterised by three main factors: (i) capacity to engage effectively with and handle multiple- and cross-scale dynamics, (ii) capacity to anticipate and cope with uncertainties and surprises, and finally (iii) capacity to combine and integrate different forms of knowledge (See Figure 1).
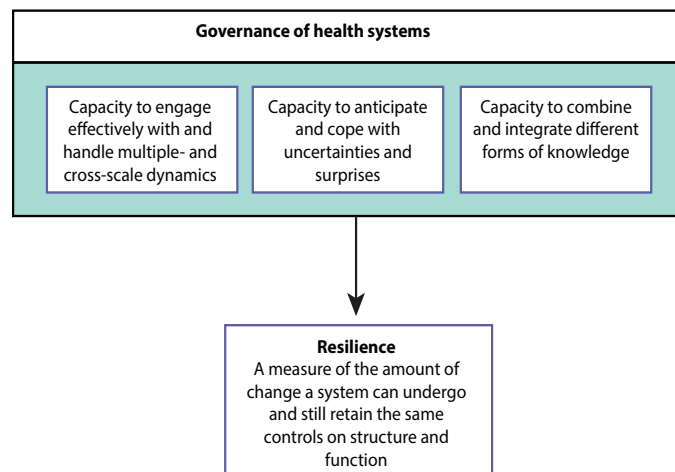
Ethical issues
Not applicable.

Competing interests
The author declares no competing interests.

Author's contribution
KB is the single author of the manuscript.

References
1. Rhodes MG. A network based theory of health systems and cycles of well-being. *International Journal of Health Policy and Management* 2013; 1: 7–15.
2. Kickbusch I. Global Health Governance: Some Theoretical Considerations on the New Political Space. In: Lee K, editor. Health Impacts of Globalization. Basingstoke: Palgrave Macmillan; 2003.
3. Commission on Macroeconomics and Health. *Macroeconomics and health: Investing in health for economic development*. Geneva: World Health Organization; 2001.

Figure 1. A conceptual framework: relationships between attributes of governance systems and the capacity to manage resilience. [Adapted by the author from Lebel *et al*. (33)]

4. Brownlie J, Peckham C, Waage J, Woolhouse M, Lyall C, Meagher L, *et al*. Foresight. Infectious Diseases: Preparing for the Future; Future Threats; London: Foresight, Office of Science and Innovation; 2006. [cited 2013 July 18]; Available from: http://www.bis.gov.uk/assets/foresight/docs/infectious-diseases/t1.pdf.
5. Bloom G, Edström J, Leach M, Lucas H, MacGregor H, Standing H, Waldman L. *Health in a Dynamic World: STEPS Working Paper 5*. Brighton: STEPS Centre; 2007.
6. Maynard-Smith J. *Evolution and the Theory of Games*. Cambridge: Cambridge University Press; 1982.
7. Kiel L, Elliott E. *Chaos Theory in the Social Sciences: Foundations and Applications*. Ann Arbor: University of Michigan; 1997.
8. Axelrod R. *The Evolution of Cooperation*. New York: Basic Books, Perseus Books Group; 2006.
9. Brinkerhoff D. Accountability and health systems: toward conceptual clarity and policy relevance. *Health Policy Plan* 2004; 19: 371–9.
10. Murray CJ, Frenk J. A framework for assessing the performance of health systems. *Bull World Health Organ* 2000; 78: 717–31.
11. Esteva G. *Development*. In: Sachs W, editor. The Development Dictionary: A Guide to Knowledge as Power. London: Zed Books; 1995. p. 6–25.
12. Crush J. *The Power of Development*. London: Routledge; 1995.
13. Bloom G, Standing H. Future health systems: Why future? Why now? *Soc Sci Med* 2008; 66: 2067–75.
14. Gunderson LH, Holling CS. *Panarchy: Understanding Transformations in Human and Natural Systems*. Washington, D.C: Island; 2002.
15. Berkes F, Colding JF, Folke C. *Navigating Nature's Dynamics: Building Resilience for Complexity and Change*. New York: Cambridge University Press; 2003.
16. Westley F, Zimmerman B, Patton MQ. *Getting to Maybe: How the World is Changed*. Toronto: Random House; 2006.
17. Bloom G. Health in a changing world. *IDS Bull* 2004; 35: 38-41.
18. Wisner B, Blaikie P, Cannon T, Davis I. *At Risk: Natural Hazards, People's Vulnerability and Disasters*. London and New York: Springer Netherlands; 2005.
19. Judt T. *Postwar: A History of Europe Since 1945*. New York: Penguin; 2006.
20. Streefland PH. Enhancing Coverage and Sustainability of Vaccination Programs: an Explanatory Framework with Special Reference to India. *Soc Sci Med* 1995; 41: 647–56.
21. Carpenter S, Walker B, Anderies JM, Abel N. From Metaphor to Measurement: Resilience of What to What? *Ecosystems* 2001; 4: 765–81.
22. Walker BH, Holling CS, Carpenter CR, Kinzig AP. Resilience, Adaptability, and Transformability. *Ecology and Society* 2004; 9: 5.
23. Holling CS. Understanding the Complexity of Economic, Ecological, and Social Systems. *Ecosystems* 2001; 4: 390–405.

24. Almedom AM. Resilience research and policy/practice discource in health, social, behavioral and environmental sciences over the last ten years. *Afr Health Sci* 2008; 8: S5–13.

25. Word Health Organisation. *Strengthening health systems: what works? Annual Report 2009*. Geneva: Alliance for Health Policy and Systems Research, World Health Organisation; 2010.

26. Blanchet K, James P. How to do (or not to do)…a social network analysis in health systems research. *Health Policy Plan* 2012; 27: 438–46.

27. Kohn LT, Corrigan J, Donaldson MS. *To err is human: building a safer health system*. Washington D.C.: Institute of Medicine; 2000.

28. Blanchet K, Girois S, Urseau I, Smerdon C, Drouet Y, Jama A. Physical rehabilitation in post-conflict settings: analysis of public policy and stakeholder networks. *Disabil Rehabil* 2013.

29. Webb C, Bodin O. *A network perspective on modularity and control of flow in robust systems*. In: Norberg J, Cumming GS, editors. Complexity theory for a sustainable future. New York: Columbia Press; 2008. p. 85–118.

30. Borgatti SP, Mehra A, Brass DJ, Labianca G . Network Analysis in the Social Sciences. *Science* 2009; 323: 892–5.

31. Cumming GS, Bodin O, Ernston H, Elmqvist T. Network analysis in conservation biogeography: challenges and opportunities. *Divers. Distrib* 2010; 10: 414–25.

32. Blanchet K, James P. The role of social networks in the governance of health systems: the case of eye care systems in Ghana. *Health Policy Plan* 2013; 28: 143–56

33. Lebel L, Anderies JM, Campbell B, Folke C, Hatfield-Dodds S, Hughes TP, *et al*. Governance and the capacity to manage resilience in regional social-ecological systems. *Ecology and Society* 2006; 11: 19.