

Ecohealth as a Field: Looking Forward

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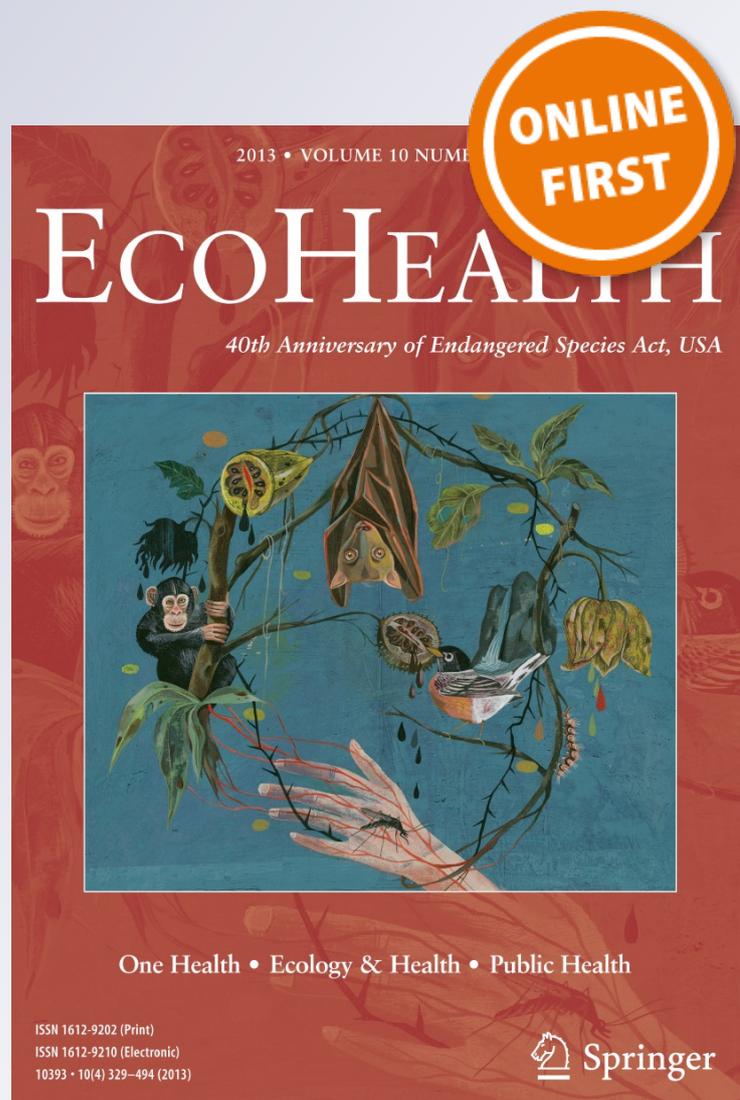
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*Forum***Ecohealth as a Field: Looking Forward**

Johanne Saint-Charles,¹ Jena Webb,¹ Andres Sanchez,² Hein Mallee,³ Berna van Wendel de Joode,⁴ and Hung Nguyen-Viet⁵

¹Center for Interdisciplinary Research in Well-Being, Health, Society and Environment, Université du Québec à Montréal, C.P. 8888, succ. Centre-ville, Montreal, QC, Canada

²International Development Research Centre, Ottawa, ON, Canada

³Research Institute for Humanity and Nature, Kyoto, Japan

⁴Central American Institute for Studies on Toxic Substances (IRET), Universidad Nacional, Heredia, Costa Rica

⁵Center for Public Health and Ecosystem Research at the Hanoi School of Public Health, Hanoi, Vietnam

Abstract: This forum paper proposes a reflection on the “field of ecohealth” and on how best to sustain a supportive environment that enables the evolution of diverse partnerships and forms of collaboration in the field. It is based on the results of a preconference workshop held in October 2012, in Kunming, China at the fourth biennial conference of the *International Association for Ecology and Health*. Attended by 105 persons from 38 countries, this workshop aimed to have a large-group and encompassing discussion about ecohealth as an emerging field, touching on subjects such as actors, processes, structures, standards, and resources. Notes taken were used to conduct a qualitative thematic analysis combined with a semantic network analysis. Commonalities highlighted by these discussions draw a portrait of a field in which human health, complex systems thinking, action, and ecosystem health are considered central issues. The need to reach outside of academia to government and the general public was identified as a shared goal. A disconnect between participants’ main concerns and what they perceived as the main concerns of funding agencies emerged as a primary roadblock for the future.

Keywords: ecohealth, field building, future

INTRODUCTION

Future historians might look back to our times and remark on the rise in concern for complex and urgent problems emerging at the interface of health, environment, and society. They would note the development of a multiplicity of perspectives calling upon notions such as equity, inter- or trans-disciplinarity, sustainability, and systems thinking to

address these problems. On further scrutiny, they would observe a tapestry of parallel and complementary efforts that seek to improve health and ecological sustainability everywhere and for all.

What would we like historians to remark on about this particular juncture in ecohealth’s evolution? Where would we like to see the field at the time of their writing of its history? How do we get from here to there?

These are some of the questions that were addressed in October 2012, in Kunming, China by 105 persons from 38 countries at a preconference workshop of the fourth biennial conference of the *International Association for Ecology and*

Correspondence to: Johanne Saint-Charles, e-mail: saint-charles.johanne@uqam.ca

Health. Participants discussed how best to sustain a supportive environment that enables the evolution of diverse partnerships and forms of collaboration, and ways to increase demand for ecohealth-type research and practice. The workshop's aim was to have a large-group and sweeping discussion about ecohealth as an emerging field that included points on actors, processes, structures, standards, and resources.

Forming a highly diverse group, participants explored “how ecohealth was done” throughout the world, addressed gaps in communication with policy makers, and discussed how to enhance the adoption of ecohealth by stakeholders and funding agencies.

The portrait that emerged was that of a dynamic field with a richness of scientific and social accomplishments. Despite divergences in how people carry out ecohealth-type research and practice, common preoccupations for the future of the field were clearly stated. Our goal with this forum paper is to identify and explore these common preoccupations and discuss how they can inform future actions in the evolution of the field. We hope that its publication immediately before the EcoHealth 2014 Conference, the fifth biennial conference of the *International Association for Ecology and Health*, will foster conversation and debate, as people from around the world gather again.

THE EMERGENCE OF A FIELD?

The frequency and impact of complex problems—or wicked problems (Rittel and Webber 1973; Turnpenny et al. 2009; Wesselink and Hoppe 2010; Brown et al. 2010)—at the intersection of health, environment, and society have been increasing over the last 50 years. Faced with the limits of traditional sciences and public health interventions to answer these problems, scientists and practitioners alike have developed new ways of conducting research and taking action (Capra 1983; Lang and Rayner 2012; Rayner and Lang 2012). These initiatives have been coalescing into perspectives with names such as “Ecosystem approaches to Health,” “Global Health,” “Resilience Thinking,” “Social Medicine,” “One Health,” “Conservation Medicine” and so on, all sharing some common elements that allow them to be considered a part of the “post-normal science associated with the erosion of boundaries between different forms of knowledge and rationality (...) and the coupling of social and ecological systems (...)” (Raymond et al. 2010, p. 1766).

Employed by many of these perspectives, “ecohealth” is an expression that has gained in popularity in the last decades and may have varying definitions depending on the context for its use. Testimony of the trendiness of the expression, anecdotal uses span from the promotion for a Wellness Center, to an anti-bacterial spray, to a shop selling “healthy food.” Closer to home is of course the title of the very journal in which these lines appear and the name of the Conference that welcomed the workshop we are reporting about.

Ecohealth can be viewed as an “approach”—a style of research and practice—leading therefore to discussions revolving around particular aspects of this style, which are regarded as foundational and as defining the uniqueness of the style. This style is also often congruent with and related to indigenous worldviews that recognize the complexity of the world we live in, where human health cannot be seen separately from ecosystems (Odora Hoppers 2002; Hart 2010).

In different thematic fields of scholarship (e.g., Conservation Medicine, Social Medicine) or different collaborative initiatives (e.g., One Health movement, Resilience Alliance), ecohealth has some resonance in core ideas and opportunities for building connections between researchers, policy makers, and practitioners.

The diversity and contention within the ecohealth field is borne out by the history of the *EcoHealth* journal. Describing the journal as a “‘gathering place’ for those exploring the perspectives, theories, and methodologies emerging at the interface between ecological and health sciences” (Wilcox et al. 2004b, p. 3), the editors recount how the journal came into existence by the joining of three “tributaries,” namely conservation medicine, global change and health, and ecosystem health (Wilcox et al. 2004a). One might add the ecohealth approaches to human health (e.g., Bunch et al. 2008; Charron 2012; Mergler 2003; Waltner-Toews et al. 2008; Webb et al. 2010) as an important fourth component stream. More recently, the momentum of the newly emerged One Health movement led to considerable debate within the ecohealth field (e.g., Parkes 2012) and it is a tribute to the resilience of the ecohealth field that this new stream has continued to be connected to it (Zinsstag et al. 2012; Zinsstag 2013).

As the title of the first editorial of *EcoHealth* [“EcoHealth: A Transdisciplinary Imperative for a Sustainable Future” (Wilcox et al. 2004b)] suggests, transdisciplinarity was one of the rallying points for the field and this concept continues to be referred to (Charron 2012; Webb et al.

2010; Wilcox and Kueffer 2008). Other commonalities are a systemic vision of the linkages between health and the environment; a quest for sustainable and equitable solutions anchored in the realities of local people, their livelihoods and communities; and a dynamic relationship between science, policy, and action (IAEH ratified constitution 2008, www.ecohealth.net; Boischio et al. 2009; Charron 2012; De Freitas et al. 2007; Hueston et al. 2013; Leung et al. 2012; Mergler 2003; Min et al. 2013; Nielsen 2001; Parkes 2012; Waltner-Toews et al. 2008; Webb et al. 2010; Weihs and Mertens 2013; Zinsstag 2013).

Many of these fundamentals are put forward by the different approaches outlined above (see for example: Berbés-Blázquez et al., in press; Zinsstag 2013) and it seems that their combination coalesces in the emergence of a “field of ecohealth;” at least such was our understanding in 2012 when we organized a workshop to create an opportunity to collectively reflect and debate about the field and its potential development.

The workshop was convened with the intention to explore ecohealth as a broad field of research, practice and teaching for addressing social-ecological problems related to health and environmental and social sustainability. It aimed to begin a conversation within and between different groups on what we all can contribute and do together, valuing and relying on the uniqueness of different perspectives and experiences as a key element of a transdisciplinary co-creation of knowledge for action. It attempted to draw attention to such elements as the diversity of actors and perspectives, processes, structures, standards and resources, and to consider what could be the future of this broader field.

MATERIAL AND METHODS

Setting the Table—“Ecohealth: Why Build a Field?”

The authors of this forum paper have all been involved in groups and communities of practice, which have contributed to the development of this field. They jointly organized the workshop entitled “Ecohealth: Why build a field?” with the aim of facilitating a forward-looking discussion on the emergence of the field and exploring ways to create a supportive environment that enables the evolution of diverse partnerships and forms of collaboration in ecohealth. Prior to the workshop, a discussion paper (Webb et al. 2013) building on on-going discussions with many

colleagues and research partners across the world was drafted and circulated to peers. People were invited to comment on the paper before, during, and after the workshop. The invitation for the workshop and the discussion paper were sent to more than a thousand people, including the conference attendees and the mailing lists of the authors’ organizations, and were also posted on the websites of various groups and organizations linked with the field, including the Website of the *EcoHealth 2012* Conference where the workshop was to be held.

Our call was heard: 105 persons participated, which was close to one third of the total conference attendance. As a testimony of the internationalization of the field, participants came from 38 different countries on six continents. Most participants were researchers from diverse disciplines (e.g., health sciences, environmental sciences, social sciences, veterinary sciences, ecology, urban planning, engineering, and the humanities, among others) working in universities and research centers, although close to a third came from different government departments, civil society organizations, and multilateral organizations, also spanning a diverse area of expertise, interests, and professional sectors.

After a short orientation to the workshop (objectives, duration, and process description), a set of specific questions was presented to be addressed in subgroups. There were two main parts to the workshop: in a first set of group discussions, people were grouped by geographic region, and in a second set of discussions, the 105 participants were randomly divided into 16 small “buzz” groups.

The written material used for the analyses presented below came from designated note takers within each group, notes taken by two note takers on the plenary presentations made by each group, index cards on which participants were invited to write their ideas pertaining to some of the questions, and the flip charts that groups used to present their discussions to the larger group. All these materials were gathered and transcribed by the workshop coordinator.

Analysis was done by the two primary authors of the paper following the grounded theory principles of qualitative data analysis (Paillé 1994). The reliability of the coding frames was tested by each author repeating the coding process a second time at a 2-week interval.

The emerging themes were then submitted to a semantic network analysis (Diesner and Carley 2011) using the softwares *UCINET* and *NetDraw* (Borgatti et al. 2002). The images were drawn using *NetDraw* and they are meant as heuristics rather than formal representations of the distance between concepts (see Figs. 1, 2, 3).

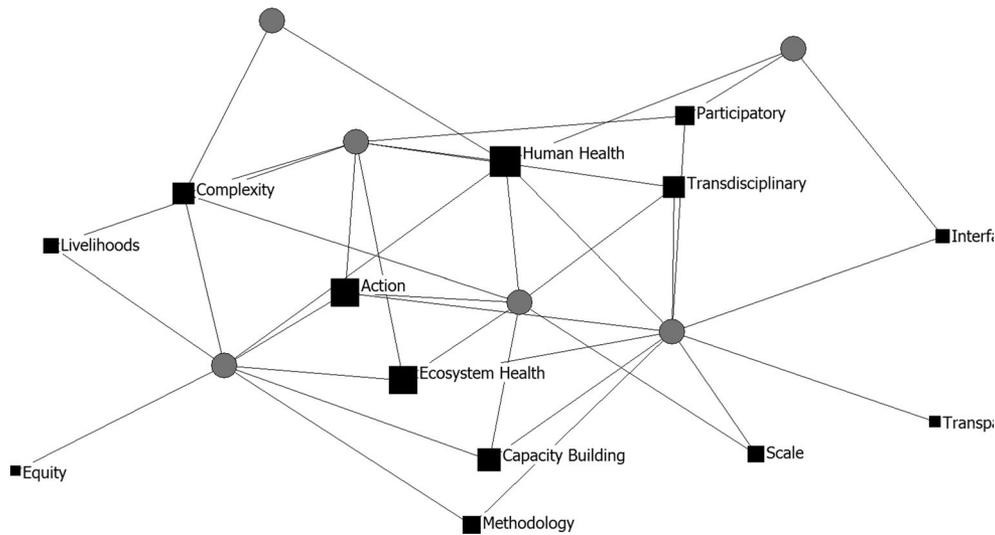


Figure 1. Semantic network analysis of the concepts generated (*squares*) by the six regions (*circles*) answering a question on the common vision of groups working in ecohealth in their region.

RESULTS

Regional Stories

The first part of the workshop centered around ideas about the status of the field of ecohealth in the groups' region. Seven subgroups were formed: Africa, Central Asia, Europe/Oceania, Latin America, Middle East and North Africa, South Asia, and South East Asia. People were asked to explore the following questions: Who is doing ecohealth-type work in your region? What groups, organizations, networks, governments, alliances, etc. are doing ecohealth-type work? What is common in their vision? Who are they trying to influence?

Each of the groups produced a picture of the evolution and organization of the field in their area,¹ and from all of the discussions, close to 100 groups and institutions were identified as actors in the field. The semantic network analysis of the common vision of groups working regionally on ecohealth revealed both similarities and differences. Figure 1 shows the links between concepts and region. Larger squares indicate concepts that were cited the most often. Following human health in occurrence were complexity (including wicked problems and systems), action, and ecosystem health. Participation, transdisciplinary, and capacity building were each cited by three of the regions; whereas scale, social–economic–environment interface,

methodology, and livelihoods were only mentioned by two regions. Finally, the concepts of equity and transparency were mentioned by only one region.

Across the six regions, government and the general public emerged as the main target of influence. Academia and industry were the next most cited targets followed by the education system, practitioners, and donors, and then by the media and investors (Fig. 2).

The Field of EcoHealth Thematically

For the second part of the workshop, four subgroups were assigned to each of four specific questions (for a total of 16 subgroups):

- (1) How could a culture of learning toward the diversity in ecohealth be promoted?
- (2) How can people and groups create opportunities to bridge silos? Which structures are needed for ecohealth to move forward and be sustainable?
- (3) How do we become more effective in inserting ecohealth into political thinking and action?
- (4) How can funding agencies be influenced to fund ecohealth research? How can ecohealth researchers from the developing world attract funding?

Distilling each of the comments from the discussions to its component parts led to the emergence of seven discrete thematic categories: Rally, Commonalities, Structure, Communication, Evidence based, Address needs, and Scholarship (see Table 1 for definitions used in this analysis).

¹ Detailed account of the regional discussions is available in the workshop report (Mallee et al. 2012).

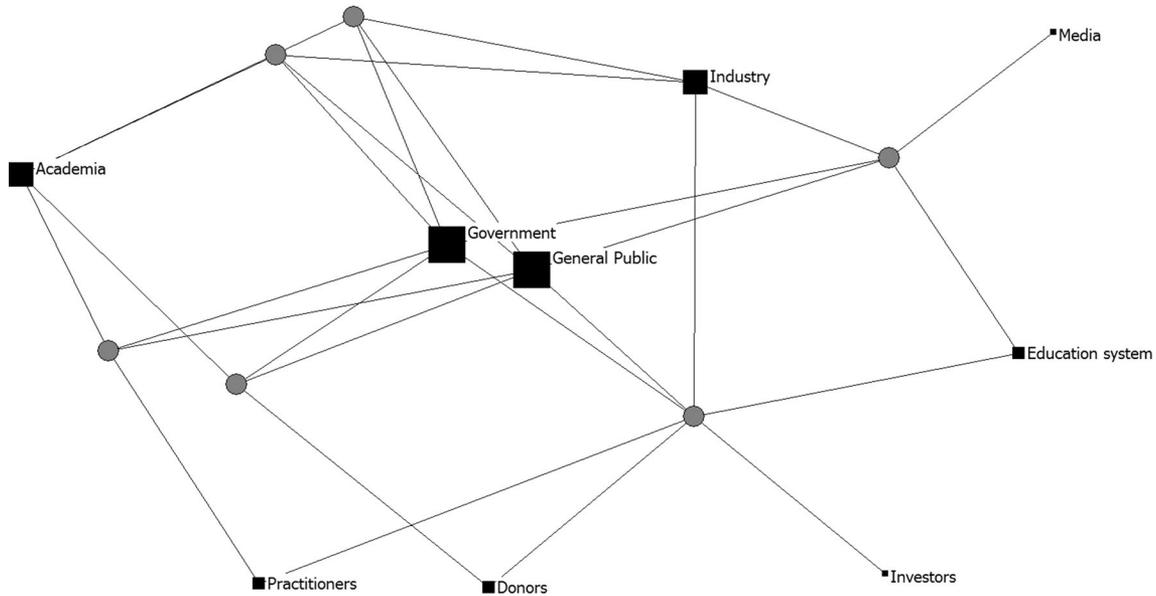


Figure 2. Semantic network analysis of the actors targeted for influence (*squares*) by the six regions (*circles*) participating in the activity.

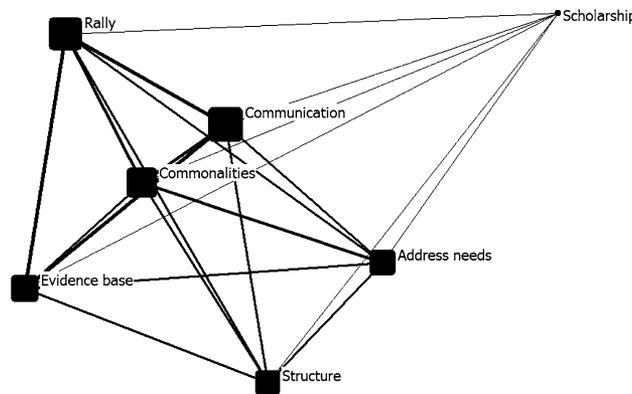


Figure 3. Semantic network analysis of the concepts evoked in a discussion surrounding next steps for the field of ecohealth. The *larger* the *node*, the more often the concept was brought up. The *thickness* of the *lines* expresses how often concepts were used together.

The analysis shows that the different questions often elicit the same concepts (Table 2) with the exception of the question on the funding agencies, which distinguishes itself, in that it has no link with “Address needs” and “Scholarship,” meaning that groups did not talk about these two concepts while addressing the question on funding agencies. The most central concepts among all questions combined are “Communication” and “Rally” closely followed by “Commonalities” (Fig. 3).

What Now?

Several workshop participants did not dub their work “ecohealth.” They refer to what they do by different names, including “Ecosystem approaches to health,” “One

Health,” “Conservation Medicine,” “Environmental Health” or others. Nonetheless, they were all willing and able to engage in discussions that made sense to them from their perspective and experience on how their work contributes to a higher-order objective of addressing health, ecosystem, and society linkages in more sustainable and equitable ways.

In that sense, “ecohealth” appears more like an “open source” domain where the inextricabilities of human, animal, and ecosystem health and their systemic relationships constitute a core idea. This core was reflected in the most central concepts that emerged as part of the vision of ecohealth in the workshop: Human Health, Ecosystem Health, Complexity and Action.

Table 1. Definitions of categories created for thematic analysis.

Category	Thematic categories
Rally	Finding ways to draw more people/groups/sectors to ecohealth
Commonalities	Identifying and promoting similar values, projects, interests, priorities, language
Structure	Addressing organizational issues inherent and emergent to the group
Communication	Finding ways to better get the ideas of ecohealth across to and hear feedback from ever broader audiences
Evidence base	Producing new data and better synthesizing existing data demonstrating that ecohealth is an approach which produces the desired results
Scholarship	Improving the theories, methodologies, and practices behind ecohealth
Address needs	Solicit, listen to, and integrate the concerns of different stakeholders into ecohealth

Table 2. Thematic categories most commonly elicited by each of the questions.

Question	Themes
How could a culture of learning toward the diversity in ecohealth be promoted?	Commonalities and structure
How can people and groups create opportunities to bridge silos? Which structures are needed for ecohealth to move forward and be sustainable?	Address needs, communication, commonalities, and structure
How do we become more effective in inserting ecohealth into political thinking and action?	Address needs, commonalities, and rally
How can funding agencies be influenced to fund ecohealth research? How can ecohealth researchers from the developing world attract funding?	Communication, rally and evidence base

Hence, not one group can claim property over the field of ecohealth —rather, the evolution of this field is occurring thanks to manifold contributions, exchanges, and debates.

From the participants' point of view, what is lacking for the field to prosper are connexions between groups and enabling structures that support conversations and collaborations between groups, not only between academics but with other social actors as well. Moreover, a need for the "field" to reach outside of academia to engage governments across sectors and the general public also clearly emerges from this workshop. Add to this the fact that participants made no links between "Funding agencies" and the thematic categories of "Address needs" and "Scholarship" and a picture of a disconnect between crucial supporting structures, the on-the-ground reality and practice emerges. This is illustrative of how funding agencies are often perceived: as distant entities that are not interested in the social relevance or the rigor of the projects that are presented to them. This perception may reflect a gap (at least a perceived one) between community and academic priorities and that of funding agencies.

Taken together, these results point to a call for more linkages—a need clearly expressed during the workshop

through words such as "Rally," "Communication," and "Commonalities." Another way to understand this plea is that it reflects the underlying tensions between the various perspectives and that participants see the need for more linkages to reduce them.

The call also highlights the necessity to learn how to communicate complex social–ecological interrelationships that affect human wellbeing and the resilience of ecosystems.

In conclusion, the term "ecohealth" allows for the expression of both common ground (human and ecosystem health, complexity and action) and uniqueness (each perspective). In terms of communicating outside the field, the common ground should permit a more coherent discourse while "uniquenesses" would help convey the diversity of issues at the nexus of health, ecosystem, and society.

One inherent internal bias in the workshop and the analysis of conversations is the fact that all participants shared some form of identification with the conference convened by the *International Association of Ecology and Health*. Yet, the crowd was far from homogenous, including an important diversity of participants from different countries, cultures, affiliations, disciplines, and professions.

Many participants did not know each other, and many were attending an IAEH conference for the first time. The salience of this synthesis lies in the inclusion of diverse actors in conversations about “the field of ecohealth” and expectations for the future.

Finally, we believe that the outcomes of this workshop show that a deeper exploration of the field and its evolution through systematic enquiries, literature reviews, and the gathering of narratives giving voice and substance to this emerging field are needed.

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