



Reimagining Internet Studies: A Web Ecology Perspective

A Web Ecology Perspective

Like the web itself, the study of the web is mostly an improvised structure. A group of progressive scholars, swept up by the technological transformation of the past decade, have done their best to keep up with understanding the massive cultural and social effects of our communication infrastructure.

Not surprisingly, the inevitable outcome of this state of affairs is that the body of research about the web is fatally fragmented. Economists are caught attempting to assert dated models against new motivational frameworks. Journalists attempt to prescribe weak methods to maintain traditional standards around the creation and transfer of information. Marketers and social media experts, still largely divorced from a universe of quantitative and technical research, fail to provide a useful approach. No coherent body of research has emerged focusing on studying the internet *as* the internet.

This has resulted in fundamental weaknesses in the approach to studying social phenomena online. Relevant approaches are being ignored and opportunities for applying cutting edge research from a number of siloed traditions are going unexplored.

Our field poses two simple questions to researchers:

- * “Where have studies about the web failed?” and,
- * “How can we do better?”

The emerging field of Web Ecology is an attempt to unify contemporary research and practice under a common focus, set of principles, and general approach to promote new insights and more fruitful forms of exchange in this space. We believe that these lay the groundwork for a more vibrant, more dynamic, and more useful field of research and community of researchers.

Focus

Web Ecology studies the relationship of the nature of data and the behavior of actors on the internet.

By the nature of data, we mean the form and meaning of platforms and content.

- * Form is the structure and capabilities of a platform or piece of content.
- * Meaning is what is contained and conveyed by a platform or a piece of content.
- * A Platform is any system which contains content and dictates behaviors which can be taken within (a platform can be recursive).
- * Content is a discrete piece of media (that can be acted upon).

Comprising the behavior of actors, we define:

- * Behavior is a pattern of action, where even a single “action” like clicking a link may represent one step in a much larger set of actions.
- * And an Actor is an entity that performs, takes, or generates an action.

Principles

Comprehensiveness

Web Ecology seeks an understanding of the expansive interconnected ecology of social systems, and is agnostic with regard to specific networks and services.

Researchers studying the web tend to focus on networks as isolated environments, rather than as platforms which are elements of a larger whole. Web Ecology aims to examine the social dynamics powering these platforms. By identifying parallels between them and documenting interactions, Web Ecology strives to investigate the interrelationships across the expanse of all networks and the dynamics that power their platforms.

Interdependence

Web Ecology is aware of the holistic nature of the internet. It declares that code and users are part of an inseparable aggregate web phenomenon.

Users and code are often seen as separate entities worthy of independent study. Web Ecology views users and code as associated and dependent elements.

Boundedness

Web Ecology emphasizes that the web is constrained by various forces and configurations.

Rather than a utopian or deterministic perspective, Web Ecology recognizes that the web is not limitless nor truly divorceable from various geographic, social, historical, and other realities.

Significance

Web Ecology acknowledges that content on the web retains inherent value.

Social media researchers often discount memes, transient cultural fads, and similar content as nothing more than an amusing distraction. Web Ecology is not only concerned with “major world events” as translated to the web, but acknowledges that patterns, in general, are extremely important. While the day-to-day bustle of online communities may appear at first to be nothing more than noise, Web Ecology contends that a closer examination reveals a valuable picture of how culture lives on the web.

Pragmatism

Web Ecology seeks to develop a methodology for understanding the structure of the web in order to inform a further comprehension of platforms, content, and users.

Among others, the field of social computing has achieved remarkable advances during the past five years in analyzing group behavior online. However, these academic fields have largely opted to focus on the continuing optimization of these methods, rather than the use of them to tackle the questions of actual social behavior online. As a result, the range of applications identified for the existing toolbox is woefully incomplete. Web Ecology intends to move from a narrow focus around the methods of measuring the web to an active effort to report on it, just as broadly as we report on the weather.

Approach

Experimental

Web Ecology takes an experimental approach to research, testing hypotheses and theories to produce reproducible conclusions.

The web ecologist views the internet as a social lab, to be studied with an emphasis on empiricism while encompassing qualitative approaches. Recognizing too that the ecosystem of the web is an ever fluid and lively space, web ecologists strive to establish interactive, live-updating, dynamic metrics on the state of the web when possible.

Empirical

Web Ecology favors the systematic creation and testing of models by employing an empirical, data-driven approach to craft a body of knowledge that defines basic axioms and builds to general principles.

The web ecologist studies community and culture online as its own unique environment. Studies of the web that merely apply methods from other fields of research inevitably promote a fragmented, inconsistent body of knowledge. To that end, Web Ecology works from a set of initial assumptions and principles to define the elements that construct the web and the ways in which they interact to influence social phenomena. We assert that this approach will provide better outcomes in shaping a unique field of research that is optimized for exploring the web.

Accessible

Web Ecology endorses openness with regard to publication.

The aspiration of Web Ecology is to better understand the relationship between the nature of data and the behavior of actors. While this holds the possibility of engineering better, more vibrant communities, the private development of these insights also opens the door to the exploitation of individuals. Taking an ethical stance, web ecologists endorse a position of openness for reporting of research and data.

Diligent

Web Ecology promotes the general documentation of social data and development of archives.

The establishment of specific, dedicated archives benefits the maturation of related scholarship. Rich archives form the groundwork for the work of web ecologists to go forward. Accordingly, Web Ecology stresses efforts to curate data for potential analysis in this and related areas of research.

This statement was developed during Web Ecology Camp, July 24–26, and in subsequent discussions on the future of internet studies throughout the summer of 2009. Contributing scholars (in alphabetical order) were: Jonathan Beilin, Bill Bushey, Patrick Davison, Sam Gilbert, Erhardt Graeff, Tim Hwang, Sawyer Jackson, Elsa Kim, Alex Leavitt, AJ Mazur, Dharmishta Rood, Mike Rugnetta, Frank Tobia, and Seth Woodworth.