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## Four-Decade Studies of Ecocriticism and Beyond—Retrospect and Prospect: An Interview with Professor Scott Slovic

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#### **Abstract**

Scott Slovic, University Distinguished Professor of Environmental Humanities at the University of Idaho in the United States, was the founding president of the Association for the Study of Literature and Environment (ASLE) from 1992 to 1995, and he edited *ISLE: Interdisciplinary Studies in Literature and Environment*, the major journal in the field of ecocriticism from 1995 to 2020. After nearly forty years of studying ecocriticism, he retired from his full-time faculty position at the end of 2023 and is now a senior scientist at the Oregon Research Institute. In this interview, Slovic looks back at his ecocritical studies in the past four decades, summarizes his important contributions, expounds his future research plan clarifying his going back to ecocritical studies from empirical perspectives which he did as a young professor and focusing on the empirical ecocriticism, a newly emerging subfield of ecocriticism, on the new journey. He made incisive comments on empirical ecocriticism, illustrating the implication of empirical ecocriticism, the necessity and significance, the methodology and strategy of having empirical ecocritical studies.

Keywords: Scott Slovic, retrospect and prospect, empirical ecocriticism.

#### Resumen

Scott Slovic, profesor distinguido de Humanidades Ambientales en la Universidad de Idaho en los Estados Unidos, fue el primer presidente de la Asociación para el Estudio de la Literatura y el Medio Ambiente (ASLE) desde 1992 hasta 1995, y editó *ISLE: Estudios Interdisciplinarios en Literatura y Medio Ambiente*, la principal revista en el campo de la ecocrítica, desde 1995 hasta 2020. Tras casi cuarenta años estudiando la ecocrítica, se jubiló a finales de 2023 de su puesto como profesor universitario y ahora es investigador senior en el Oregon Research Instittue. En esta entrevista, Slovic echa la vista atrás para explorar sus estudios de ecocrítica de las últimas cuatro décadas, resumiendo sus importantes aportaciones, y expone su plan de investigación futuro clarificando que vuelve a los estudios ecocríticos desde perspectivas empíricas que ya hizo en su juventud y centrándose, este nuevo viaje, en la ecocrítica empírica, un nuevo campo emergente dentro de la ecocrítica. Hizo comentarios incisivos sobre la ecocrítica empírica, ilustrando la implicación de ésta, la necesidad e importancia, la metodología y la estrategia de tener estudios ecocríticos empíricos.

Palabras clave: Scott Slovic, retrospectiva y perspectiva, ecocrítica empírica.

**I:** Hi, Professor Slovic, you have been exploring the field of ecocriticism for nearly 40 years, and you always try to promote and trigger the development of ecocriticism. Can you summarize your decades of study as an ecocritic briefly and do you have any plans for your future research?

**Scott Slovic**: With regard to your request that I "summarize" my nearly four decades of work in the field of ecocriticism, it's obviously impossible for me to briefly capture everything I've learned and experienced during this extremely transformative period in the field, the final decades of the twentieth century and the early decades of the twenty-first. When I began doing my research as an ecocritic, while I was still a doctoral student in the 1980s, we did not even have a name for this field—William Rueckert's term "ecocriticism," coined in 1978, was not widely known until Cheryll Glotfelty began using it in the late 1980s and then she and Harold Fromm reprinted Rueckert's essay in their 1996 book *The Ecocriticism Reader*.

I began my work in this field as a rather traditional "textual critic," selecting literary works that I found to be beautiful and interesting and not yet thoroughly studied by other scholars—and then interpreting the meaning of those works by myself, alluding to what other scholars had said about these works and certain literary traditions. Later, as I became more familiar with the trends and possibilities in environmental literary studies, I found myself writing more theoretical and historical articles and books, attempting to chart new directions and identify significant patterns.

Over the course of my decades of working in this field, I've seen numerous micro-disciplines emerge—from environmental justice ecocriticism to material ecocriticism—and I guess I've dabbled in many of these subfields myself while working on various lectures and articles and book chapters, but much of my own work has been in the role of providing a bird's-eye view of the field, describing the larger trends or "waves" as I've begun to recognize them and providing some theoretical language to try to support directions I've felt would be fruitful for colleagues and for my own work.

I've been especially gratified to see the interest in ecocriticism expand to many regions of the world—of course I recognize that there were already local versions of ecocriticism in particular areas, such as tinai-focused scholarship in southern India, but ecocriticism was still a rather "Western" school of thought in the 1980s. This is no longer the case. Although North America and Europe remain energetic places for ecocritical innovation, I can clearly see a lot of important work coming out of East and South Asia, Latin America, various regions of Africa, certain Mediterranean countries, and so forth. The fact that we have new variants (to use a pandemic-like term) of ecocriticism developing, such as empirical ecocriticism, is a sign to me that the field is vibrant and healthy and, in its own way, optimistic as it seeks to contribute to society's efforts to tackle very difficult challenges, such as effectively communicating about global climate change and the plight of many human and animal communities throughout the world.

More recently I have been involved in trying to bring together ecocriticism with

other significant disciplines—such as environmental aesthetics, environmental communication studies, and the medical humanities—in pursuit of new meta-disciplines (or what I sometimes call "meta-meta-disciplines") that aim to use the vocabularies and methodologies of multiple fields in order to address not only textual issues but actual cultural and psychological and environmental challenges we face in the twenty-first century. I often find that we need to work outside of our narrow academic fields, hand in hand with sister disciplines, if we genuinely wish to have a chance to come up with useful approaches to "real-world problems."

I have long had an interest in learning how environmental texts actually achieve their effects on audiences and what these effects really are. Like many humanities scholars, my earlier work has usually involved sitting by myself with a text, trying to determine how I felt about the text and what I was learning from that text. This kind of solitary research is what literary critics and other humanities scholars have traditionally done. But it has also been clear to me that I've been working with a strikingly small pool of research subjects—namely, myself! In the social sciences, in order to have a reliable number (N) of subjects, you need as large a group of respondents to an experiment as possible, certainly many more people than a single respondent. I actually began doing some early empirical research projects with large numbers of experimental subjects back in the early 1990s when I was a young professor, teaching lecture courses with around 200 students; I conducted a few studies in which I asked my students to respond to questionnaires about environmental attitudes before they read certain literary works and after they read these works and heard me lecture about them. I referred to these projects many years ago as "the efficacy of eco-teaching" because I wanted to understand whether my teaching of environmental texts was actually making a difference in how my students thought about the world. However, I felt that these early studies did not produce very useful data, so I never wrote up the projects and published my findings.

In the past ten years or so, a new subfield of ecocriticism known as "empirical ecocriticism" has been developed, using social science methodologies to determine how audiences are responding to various kinds of environmental texts. I have recently been appointed as a senior scientist at the Oregon Research Institute in Eugene, Oregon, where my father and some of his colleagues in the field of psychology are also working. In the coming years, I expect to do more and more empirical projects, collaborating with my father and other psychologists, to try to explain more authoritatively than we've been able to do in the past the ways that different kinds of texts—such as climate fiction, narratives of place-based environmental values, texts that present scientific warnings about environmental disaster, and pandemic-related stories—reach readers (and audiences for other kinds of media, including film and music) and help such audiences to think deeply about important issues.

So my future work is likely to be increasingly related to the field of interdisciplinary empirical ecocriticism, and I also expect to continue writing shorter essays (opinion essays or "op-eds" and blog essays for websites) about these empirical studies, with the intention of reaching not only scholarly audiences but the

general public and societal leaders who might take an interest in such work and find the academic discoveries useful, even if they don't want to read the full research papers in technical journals or scholarly books. This effort to reach new audiences and larger audiences is what I often call "going public," and I feel this is a very important trend in ecocriticism and the larger field of the environmental humanities, which includes ecocriticism.

**I**: As we know, you have always been exploring and guiding the field of ecocriticism in the past four decades. What do you think are your important contributions to ecocriticism and the environmental humanities?

**SS**: This is a difficult question and one that I actually don't think about very much—even as I approach my retirement from full-time teaching after thirty-eight years, I am looking ahead to my next projects, not really dwelling on what I've already done. However, I do think it could be interesting to reflect briefly on what I've tried to do over the course of the past several decades.

I've worked on so many different aspects of my field that it's not easy to summarize my primary contributions. The parable of the six blind men and the elephant comes to mind because of the way each man touched a different part of the elephant—the ears, the trunk, the tusks, the legs, the tail, and so forth, so they each claimed that the elephant was something very different than what the others perceived. My own career has included substantial efforts as an organizer and administrator within (and beyond) the field of ecocriticism, as a teacher, as a traveling scholar working to engage with new communities of colleagues and students in many parts of the world, as a researcher in various subfields of ecocriticism, as an editor of books and journals, and as a public intellectual working to communicate with audiences outside of academia. All of these have been important aspects of my work, it seems to me.

As you know, I spent a significant part of my early career helping to conceptualize and manage the Association for the Study of Literature and Environment (ASLE), which was officially established in the United States in October 1992. I served as the founding president from 1992 to 1995, helping to create the advisory board, the organizational bylaws, and a functioning administrative structure (including a process of leadership succession) and also to grow the initial membership (which was 54) to well over a thousand members. Over the years I have also tried to support colleagues in many other parts of the world who were interested in creating their own ASLE branches. Often, I've traveled to these countries or regions to attend planning meetings and special events at which the new branches were presented to the members—I've done this in Japan, Malaysia, Latin America (Argentina and Brazil), Taiwan (China), India, Bangladesh, and Pakistan.

As a scholar, I started my career by publishing books and articles about environmental aspects of American literature and culture—the Thoreauvian tradition, you could say. I was especially interested in the psychological aspects of American environmental literature, such as how such texts depict and examine

human consciousness of the more-than-human world and how literary texts (and other kinds of cultural texts) might work to communicate environmental information and raise readers' awareness of environmental issues. This was the focus of my first book, Seeking Awareness in American Nature Writing (1992), and in a sense this has been an ongoing theme in much of my research for the following decades—how literature and art communicate to audiences and raise awareness (or fail to raise awareness). I continue to study this kind of topic today, although at this point, I am planning to use more empirical approaches, drawing from the methodologies of the social sciences, to design studies that test audience responses to environmental texts through experiments of various kinds. I guess you could say that my interest in literature as literature has evolved into an interest in how literature and many other forms of cultural expression function as examples of environmental communication, not simply as art. My interest in bringing together ecocriticism and communication studies is reflected in the 2019 collection I edited with my Indian colleagues Swarnalatha Rangarajan and Vidya Sarveswaran—The Routledge Handbook to Ecocriticism and Environmental Communication.

Over the years, up to now, I have written, edited, or coedited thirty-one books—and published more than 300 articles, interviews, forewords and afterwords, and reviews, among other miscellaneous things. It would be a big challenge to summarize all of this. But I can say that major categories of this work include environmental writing textbooks, collections devoted to regional literature (especially in the desert Southwest of the United States), regionally focused collection of international ecocriticism (Japan, Turkey, India), interdisciplinary projects (bringing ecocriticism into conversation with such fields as psychology, communication studies, and the medical humanities), historical and theoretical explanations of key phases and ideas in ecocriticism, and forays into environmental activism.

For most of my career, I have also been working as an editor of important publications in the field, beginning with The American Nature Writing Newsletter in the early 1990s (which later became ASLE News, the newsletter of the organization ASLE), and then for a twenty-five-year period from 1995 to 2020 I was the editor-inchief of ISLE: Interdisciplinary Studies in Literature and Environment (the central journal in the field of ecocriticism), for which I edited more than 70 issues, writing Editor's Notes for each issue, trying to describe the important new directions in the field. I also edited the book series Environmental Arts and Humanities for the University of Nevada Press and The Credo Series for Milkweed Editions in the late 1990s and early 2000s, and from 2017 to the present I have co-edited Routledge Studies in World Literatures and the Environment and Routledge Environmental Humanities for the prominent British academic publisher Routledge. Through all of these years, I have served as a guest editor of fifteen special issues of journals in different parts of the world (on topics ranging from ecocritical theory to water literature, desert literature, international environmental literature, and trees in literature) and on more than twenty editorial boards for various journals. In 2015,

after my father and I published our book on the psychological and environmental humanities aspects of human sensitivity and insensitivity to information about humanitarian and environmental challenges, *Numbers and Nerves: Information, Emotion, and Meaning in a World of Data*, we created the website www.arithmeticofcompassion.org, and I have served as a contributing editor for that website, too, for nearly a decade now. So editorial work has been a key—and highly visible—aspect of my career.

I could go on and on about various specific aspects of my work, but that would be boring. Perhaps I should conclude this trip down memory lane by saying that throughout all of my other activities, I have always been working as a teacher, since my time as a graduate student at Brown University in the mid-1980s. Even during my research sabbaticals, I have often found myself doing some guest teaching at other universities—in addition to my primary affiliations with Texas State University, the University of Nevada-Reno, and the University of Idaho in the United States, I have been a guest professor for periods ranging from a week to a full year at nearly thirty universities in many different countries. Often, I have taught or offered extensive lecture series at Chinese universities, such as the Guangdong University of Foreign Studies (where I was a Fulbright Visiting Professor in 2006 during my first visit to China), Central China Normal University, Shandong University, Tsinghua University, and most recently the Nanjing University of Aeronautics and Astronautics, as you know. In addition to my formal classroom teaching, I have spent a lot of time and energy mentoring individual students at my home and host universities and also random students who contact me via email or meet me at conferences and ask for guidance with their theses or other projects. I have often tried to mentor my colleagues from many different countries, too, offering them advice about their research and teaching and their efforts to create communities of ecocritics in their own countries.

Another aspect of this mentorship and work to help shape the development of ecocriticism and related fields has been my work as a reviewer of article and book manuscripts for journals and publishers in many different countries—I have reviewed hundreds of manuscripts throughout the years, writing reports (often anonymously) that I hope have helped my colleagues improve their own research projects before publishing new scholarship in the field. And I have frequently performed external evaluations of student theses, faculty promotion cases, and entire academic programs—usually 10-15 such evaluations per year—which I also consider to be an important way of contributing to the academic community, often (but not always) within my particular discipline. In the United States, I have often been a member of external review committees for environmental studies programs at colleges and universities, representing the humanities perspective in these review processes which also involve colleagues from the social and natural sciences. A lot of this work has been relatively invisible (indeed many of my reviews have been anonymous), but it takes quite a bit of time and it's a powerful way of contributing to the robustness of my field. It is also, in many cases, a form of invisible teaching—not by standing in front

of a class but by providing insights and suggestions to colleagues and students through the process of blind peer review.

This is probably much more detail than you wanted when you asked your question! I think you can see how a blind man encountering any aspect of my work—my administration, my editing, my teaching, my research—might think this one thing is who Scott Slovic is and what he's devoted his time to. But the reality is I've been quite active in a lot of different areas—and I expect to continue to do so for many years to come, though perhaps reducing the amount of classroom teaching (and grading of student papers) when I retire from the University of Idaho at the end of 2023 to become a full-time senior scientist at the Oregon Research Institute in Eugene, where I'll join a team of scholars that will include my father, psychologist Paul Slovic, who is still fully engaged with his own research at age 85.

I: Thank you so much, Professor Slovic. You are surely one of the most important participants, pioneers, and torchbearers in the field of ecocriticism. As for your future work, it is very interesting to know that you will be moving more and more in the empirical direction in the coming years. Empirical ecocriticism is an emerging field in recent years. How do you understand or define empirical ecocriticism?

**SS:** Simply put, empirical ecocriticism is an approach to environmental texts that involves adapting research methodologies from the social sciences as a way of gathering data—"empirical data"—about how audiences respond to these texts and how texts function linguistically. Most current work in empirical ecocriticism focuses on audiences responses, and this information is gathered by way of experiments that use survey questionnaires (often presented to experimental subjects online through such devices as Amazon Turk).

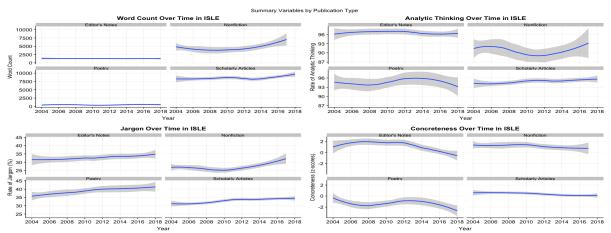
For the recent book titled *Empirical Ecocriticism* (2023), I worked with a colleague in communication studies named David Markowitz to conduct an automated text analysis of fifteen years' worth of journal issues in the field of ecocriticism in order to try to trace the development of ecocritical language. We used something called Linguistic Inquiry and Word Count (abbreviated as LIWC), which is a tool from the field of computational linguistics, in order to detect tendencies related to wordiness, analytic thinking, jargon (or highly technical language), and concreteness (the opposite of abstract theoretical thinking) in ecocritical articles that had appeared in the journal *ISLE: Interdisciplinary Studies in Literature and Environment* during the years 2004 to 2018 (I served as editor-in-chief of this journal, the central journal in the field, from 1995 to 2020). So, while most forms of current empirical ecocriticism seem to focus on studying audience responses to texts, there are also other approaches, such as the computational linguistics approach I've just described.

I: You've just offered a short introduction to your paper "Tracing the Language of Ecocriticism Insights from an Automated Text Analysis of ISLE: Interdisciplinary Studies in Literature and Environment" from the book Empirical Ecocriticism:

Environmental Narratives for Social Change, co-edited by Alex Weik von Mossner, W. P. Malecki and Frank Hakemulder, published in August 2023. Can you share something about what you discovered about the language of ecocriticism by using this computational linguistics methodology?

**SS:** Although scholars have been analyzing environmental texts for many decades, the term "ecocriticism" was first used by American scholar William Rueckert in 1978 and the discipline became a formal and increasingly widespread trend in the humanities only in the 1990s, after the Association for the Study of Literature and Environment (ASLE) was started. So, this is a relatively new field. During the time period emphasized in this article—2004 to 2018, a fifteen-year period—there were interesting "growing pains" in the field, especially in North America and Europe. One of the key aspects of this growing process was the question of whether or not ecocriticism should be "theoretical," whether scholars should be developing a new vocabulary and a new kind of philosophical thinking to explain environmental texts and human beings' interactions with the nonhuman world.

By simply paying attention to the kinds of books and articles that were being published in the first two decades of the twenty-first century, we might have the vague sense that ecocriticism was becoming more "sophisticated" and was developing its identity as a discipline, but we might not have a lot of easily accessible proof of this, aside from examples of individual articles. But by taking many textual examples and running them through a linguistic analysis program, we can gather a lot of data quickly and actually "see" the developmental process in front of our eyes. For the article that we published in *Empirical Ecocriticism*, David Markowitz and I presented both statistical information about subtle linguistic changes that we observed from the 713 scholarly articles, poems, nonfiction essays, and Editor's Notes that we exampled from the journal *ISLE*, but we also produced graphs that displayed the changes. Below is an example of one of these graphs, summarizing linguistic changes over time by publication type (that is, by genre).



I am especially interested in what these graphs show regarding the scholarly articles because these are the most direct representations of ecocritical studies during this time period. You can see that these articles became slightly longer (more words), showed a slight increase in analytic thinking (represented by the use of "function").

words" such as articles, prepositions, and pronouns), presented more technical language or jargon, and were less concrete (in other words, more abstract). All of these linguistic indicators tend to corroborate my own feeling as a scholar and as the editor-in-chief of the journal during this time period that the field was becoming more mature and more theoretically sophisticated than it was in the 1980s and '90s when it was just beginning to develop.

It's possible that we did not really need to do this kind of empirical textual analysis in order to confirm the feeling that ecocriticism was evolving into a mature discipline in the early 2000s, but it is interesting to note that such a computer analysis can help us detect subtle changes in ecocritical language during a time period when many scholars were debating about the pros and cons of ecocritical theory and when many people were actually trying to create new language or jargon—such as ecohorror, ecophobia, queer ecopoetics, slow violence, transcorporeality, liminality, migrant ecologies, and many other terms—that would help them capture important ideas relevant to environmental texts and contemporary ecological and cultural phenomena. In the case of this particular study, I think the empirical approach provided confirmation of what I already believed was happening in the field of ecocriticism, not necessarily entirely new ideas that had not occurred to me.

**I**: You have been working on many subfields of ecocriticism in the past decades. Why do you choose or focus on empirical ecocriticism in your future work?

**SS**: I have actually been interested in using empirical approaches to understand how environmental texts affect audiences for many years, dating all the way back to the 1990s, as I mentioned above. This is not an entirely new idea of mine. I guess it just seems important to me that we try to use every possible tool to understand more deeply and precisely how people react to various kinds of communication strategies. We can determine this to a certain extent by reading books, watching films, and experiencing other kinds of texts ourselves, but I think we can gather much more authoritative data if we try to adapt empirical techniques from the social sciences to our study of environmental communication.

After teaching in the environmental humanities since the mid-1980s when I was a postgraduate student, I will be retiring at the end of 2023 from my full-time faculty position at the University of Idaho and taking on a new position as "senior scientist" as a social science research institute called the Oregon Research Institute, where my father and his team of colleagues in the field of psychology also work. (My father is now 85 years old but is still very active with his research and eager to pursue new projects.) I will now devote myself to many new research projects and will continue to travel around the world to give lectures and teach short courses, but I will mostly be focused on conducting new research. This seems like an ideal time for me to turn energetically toward empirical ecocriticism, which is now gaining a lot of attention in the international scholarly community and which is something I have long wanted to do.

In recent years I have written traditional, non-empirical articles about the

potential of pandemic fiction to help readers become more "vigilant" about their own vulnerability due to various kinds of risky situations (such as disease) and about the weaknesses of the World Scientists' Warning to Humanity (a co-authored series of articles by major natural scientists from around the world in response to global climate change), but I would like to try to do some of these studies again in a more empirical way. I want to test experimental subjects' responses to pandemic texts and see if they actually develop a kind of sensitivity to their own "precarity" (their potential exposure to dangerous diseases) that could help them also be more sensitive to the risk of environmental damage caused by climate change, etc. And I want to see what kinds of language function most effectively as warnings to people of existential risk, such as climate change and extinction. I think the World Scientists' warnings so far are rather boring, too full of data and information and not experiential/emotional enough—but I think I need to collect data on whether other readers also find these articles boring and what kinds of communication strategies might be more powerful. So, the desire to conduct these kinds of projects is what's drawing me in the empirical direction these days.

I will be applying for research grants from the U.S. government and from private foundations to support the work I hope to do in the future, as some money is often needed to pay research subjects and to pay for data analysis when one does empirical work.

I: Empirical ecocriticism has renewed the paradigm of literary studies by adopting the methodologies of the social sciences. However, some argue that this trend implies the dissolution of the "humanities," and that its unique methodology leads it to be detached from literary studies. How do you see the relationship between empirical ecocriticism and traditional ecological literary studies?

**SS:** I believe there will always continue to be people who are devoted to "traditional ecological literary studies," whatever that might mean. There will always be individual scholars who read texts with imagination and insight and then report their understanding of the "meaning" of these texts based on personal interpretation. I love this kind of scholarship, too, and I greatly enjoy and benefit from reading books and articles that demonstrate this kind of approach, from various theoretical perspectives.

However, I also believe we benefit a lot from being open to new theories and new methodologies, regardless of what academic discipline we're in. I think the social scientists and natural sciences could probably benefit from being more engaged with some of the aspects of the humanities, such as using narrative to understand how the scientists are personally involved in the subjects they're studying. Also, the linguistic aspects of understanding cognitive processes (how we think) and how we communicate scientific information are closely related to some aspects of what I want to understand as a humanities scholar. It simply makes sense that we find ways to collaborate across our disciplinary boundaries and expand the possibilities of our inter-related fields.

When I started as an undergraduate, I actually thought I wanted to study

psychology. Remember, I grew up with a father who was a very famous psychologist— Paul Slovic, one of the founders of modern decision-making science and the study of risk perception—so I was quite familiar with certain aspects of psychology from talking with my father about his research even when I was very young. I used to read (and help to edit) his research manuscripts when I was twelve or thirteen years old. But when I went to Stanford University as an undergraduate, I found that I was especially excited by my literature classes and was able to go immediately into the most advanced postgraduate classes without needing to take a lot of basic introductory classes, so that's why I ended up as a literature major, an English major. Still, I have always had a fascination with psychology and have often used psychological ideas in my ecocritical work, such as the focus on "awareness" in my Ph.D. dissertation, which became my first book, titled Seeking Awareness in American Nature Writing (1992). I have found that psychological ideas have been very helpful when I have tried to read environmental texts in innovative ways, and I don't think gathering data from empirical studies will somehow prevent me from continuing to interpret the patterns I notice in the texts themselves.

In fact, I plan to continue writing traditional literary studies that emphasize textual interpretation and historical and theoretical analysis in addition to doing new kinds of empirical projects. I expect that other empirical ecocritics will also continue doing the more traditional work even as they experiment with some new interdisciplinary methodologies.

**I**: What do you think of the necessity and significance of conducting empirical ecocriticism studies in the epoch of the Anthropocene?

**SS:** As I understand it, the Anthropocene is a time of environmental crisis. The idea that humans have fundamentally altered the physical nature of the planet—that we have become a kind of "geological force"—is not simply a neutral physical reality. This is a deeply worrisome phenomenon, one that threatens the potential of humans to continue safely and comfortably inhabiting the earth. In fact, I believe the Sixth Mega-Extinction, the process of losing thousands of species of plants and animals across the planet, is a project of human behavior—in other words, the rampant extinctions we are witnessing are an aspect of the Anthropocene. Human beings, too, are in a condition of precarity nowadays, even if we do not live our daily lives recognizing this—we, too, have the potential to go extinct someday or at least to live increasingly difficult lives.

If we happen to believe that it might be a good thing for us to change our individual lifestyles and our public policies in order to somehow mitigate the worst human impacts of the Anthropocene on ecological systems around the world, then it probably makes sense for us to understand better how to communicate the scientific and cultural aspects of the Anthropocene to the general public and to societal leaders, so that we can all make smarter decisions about how to live and how to organize our societies. I think empirical studies of environmental communication (which is another way of saying "empirical ecocriticism") would be a helpful tool for helping us

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to share knowledge and inspire positive cultural change. Empirical ecocriticism, in a sense, is a product of the environmental conditions of the Anthropocene, and if we use such empirical approaches well, we might be able to eventually mitigate some of the worse conditions of the Anthropocene. It's possible that we have now reached a "tipping point" with regard to global climate change and other dire aspects of the Anthropocene, a point of no return to previous, more benign conditions. But we can still do our best to try to help humans and other species live good lives on the Earth. I am committed to helping with this process as much as possible, using whatever skills and knowledge I might have.

**I**: What are the effective specific tools or methods which can be adopted in the studies of empirical ecocriticism?

SS: It would be difficult to provide a thorough summary of all the social science methodologies that are available to empirical ecocritics. These are summarized quite well and demonstrated through examples in the new Empirical Ecocriticism book and in the Spring 2020 issue of the journal ISLE (the final issue for which I served as editor-in-chief), which also provides a general overview of empirical ecocriticism and several good examples of this kind of research. Basically, empirical ecocritics need to design "experiments" that, in many cases, involve selecting texts, selecting research participants ("experimental subjects"), figuring out what kinds of information ("data") they want to gather from the subjects, and creating "instruments" (questionnaires, tests, and other means of eliciting this information from subjects), finding funding to pay the research subjects and to pay for data analysis, and working with colleagues (probably from social science disciplines) to dream up the research projects, create the tools, and interpret the information gained from the studies. Perhaps finding colleagues in the social sciences to help with this kind of research in the most fundamental part of the process because most of us who do ecocriticism have not designed this kind of empirical study in the past. After we do a few of these projects as part of an interdisciplinary team, we might be in a better position to do this work on our own, although it is common for social scientists to work with coauthors, so in the future empirical ecocritics might also routinely find it useful to do this kind of work with research partners.

**I:** What do you think is the main category of the text that empirical ecocriticism focuses upon? Is it more often than not related to the narratives of disasters, animals, and emotions?

**SS:** Yes, so far empirical ecocritical projects seems to have focused on various kinds of disasters (especially climate change), attitudes toward animals, and on how texts influence readers and viewers emotions (feelings) with regard to various subjects. However, there is actually no limit to the kinds of topics empirical ecocritics can study, especially with regard to how texts impact audiences or how texts are constructed. The computational linguistics project that David Markowitz and I wrote for the *Empirical Ecocriticism* book is an example of the latter—a study of the way ecocritical

language has evolved over time. But most empirical work so far has focused on gathering information from readers of books and viewers of films and television series about their responses to these "texts." That said, the texts could emphasize a wide range of subjects, well beyond the themes that have been studied up to now.

As I mentioned above, I am particularly interested in developing some empirical projects pertaining to the sense of urgency/vulnerability in response to pandemic texts, wondering if the fear about personal vulnerability that might be inspired by such texts might be expanded to readers' feelings about other kinds of threats, such as environmental degradation. I have not yet designed an experiment to explore this topic, but I hope to do so in the near future.

Also, as mentioned above, I think it would be fascinating—and possibly important—to know more about the language of warning, as this is something our leading scientists are trying to articulate ("Watch out! Pay attention to what's happening to the planet before it's too late!"). The scientists think they know how to express warnings by simply presenting scary information in brief, non-technical ways. But I still find their warnings to be dull and ineffective—in fact, I think they're boring and not inspiring. I would like to prove this by gathering data about readers' reactions to the existing scientists' warnings and perhaps ask some of my literary colleagues to write new warnings using other styles of language (including narrative language) and then test how these new kinds of warnings affect readers.

Again, there is not particular limit to the kinds of topics one could study empirically, but you're correct that, so far, the projects have tended to focus on disasters, animals, and emotions.

I: I note that some climate fiction is set in real places relevant to readers' daily lives. For example, The Water Knife takes place in real places such as Phoenix. Can we therefore apply the methods of empirical ecocriticism to investigate how narratives affect readers' perceptions or attitudes toward the particular country and their role in solving the ecological crisis in the Anthropocene?

**SS:** Oh yes! One of the things that empirical ecocriticism is well suited to accomplish is to ascertain readers' attitudes toward various topics, including images of certain places or cultural groups. Psychologists have been doing this kind of research for many decades, though not necessarily focusing on how particular textual prompts have elicited readers' attitudes. Ecocritics and other specialists in cultural texts are in a good position to identify interesting texts—not only literary texts but possibly films, television series, blogs, and websites—that could be used as prompts before testing how readers (or viewers) respond to the prompts. I think it should be quite possible to test experimental subjects' attitudes toward national or cultural groups vis-à-vis ecological crises by way of empirical ecocritical studies. I'm not aware that people have been doing this kind of project so far, at least I don't think anything has been published about this type of research.

I: Empirical ecocriticism provides objective data to inform us about the impact that the Anthropocene narratives have on their readers. How do you think the results of empirical ecocriticism should be further utilized beyond just providing evidence for ecocritics? Or what do authors, readers, and society have to do based on these data in order for it to have a truly positive effect on the environment and society?

**SS:** Yes—this is really the key question, isn't it? If we hope to help solve serious problems in the world today, then we need to know what to do with the results of our research.

Psychologists and other social scientists have long been serving as advisors to government officials and business leaders on various subjects involving policy development and communicating effectively with the public about technological risks and other subjects related to living good, healthy, safe lives. I think empirical ecocritics, in the coming years, will be developing a good understanding of how to communicate more effectively about environmental concerns, which will be extremely helpful to environmental scientists and even to literary authors and journalists who hope to be more successful in capturing the attention of readers and inspiring better government decision making and citizen action to work toward more sensible environmental policies.

Although we have long had writers and other communicators who have been very skilled in sharing ideas about major social and environmental challenges with the public—such as Rachel Carson in the United States and Ishimure Michiko in Japan, among many others—I believe the discoveries of empirical ecocriticism will confirm that particular communication strategies have the best chance of truly moving audiences to think in new pro-social, pro-environmental ways. I realize this might sound dangerously pragmatic and utilitarian, more so than many humanities scholars would be happy with—and I understand that such practical goals are not always the best use of humanities scholarship, which is actually a way to explore deep, unsolvable mysteries regarding the human imagination, the human soul. However, I also believe we live at a time of unprecedented social and ecological challenges, and we as a species need to do a better job of aligning our lifestyles and public policies with the realities of the planet or we might end up with a barely inhabitable earth. I don't want this to happen, so I'm willing to take the risk of participating in a more pragmatic kind of communication research than I've done in the past—by which I mean empirical ecocriticism.

I: You have commented that empirical ecocriticism is a new trend in the environmental humanities. What do you think of the future of empirical ecocriticism?

**SS:** Although ecocritics, including me, have been dreaming about various empirical approaches to our field for many years (my first attempts, which I described above, were in the early 1990s), the field is actually extremely new. Only within the past ten years have growing numbers of scholars been moving in this direction, participating in "the empirical turn." So many of us are actually just learning how to design empirical experiments and analyze the data we're collecting. The new book *Empirical* 

*Ecocriticism* and the website on Empirical Ecocriticism that is managed by Alexa Weik von Mossner at the University of Klagenfurt in Austria are extremely recent, just beginning to reach colleagues in the environmental humanities, let alone beyond the environmental humanities. So, there is a lot of room for the field to grow.

As you mentioned above, much of the existing empirical ecocritical research focuses on such themes as disasters (including climate change), attitudes toward animals, and various approaches to human emotions. I can imagine that future empirical scholars will study not only artistic texts but more practical kinds of texts, such as the World Scientists' Warning to Humanity, which I mentioned in this interview. Or various kinds of journalistic texts or the speeches politicians and diplomats give at international conferences on the environment, such as the COP climate change summits.

**I**: Thank you very much for your inspiring and thought-provoking retrospect and prospect of your studies.

**SS**: Thank you for such great questions.

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