

Postscript

In recent years, the caliber of students has changed greatly due to the policy of prioritizing graduate school. In addition to the University of Tsukuba, at which I currently teach, the number of students admitted to the master program at universities across the country has increased rapidly. Universities are accepting students of various backgrounds, and I hear that many of them are not being sufficiently prepared by the foundational classes of courses such as climatology and meteorology. For better or worse, in the world of today, it is possible to write a decent graduate thesis or master dissertation by diagrammatizing data sets available online or results obtained from running packaged numerical models. However, it is also true that these research papers, which stir one to doubt whether they constitute research where thought has truly been put into the underlying physical processes in the quest for the answers to nature's mysteries, are being mass produced inferiorly. It was from wondering about what I had to do, as a faculty member of a provincial university, that I thought of publishing this book.

Environmental problems, which reached new heights in the latter half of the 1980s, began to be broadly recognized by people as we entered the 21st century, starting with global warming. Nothing illustrates the atmosphere of the period more clearly than the joint award of the Nobel Peace Prize to the IPCC and former vice-president of the United States Al Gore. There is probably no one who denies the fact that discussion regarding climate change plays an important part in the steering of this so-called Spaceship Earth. However, it is felt that in the haste to arrive at the conclusion without sufficiently validating and interpreting research into the processes, all we have achieved is the unintended consequence of an information overload.

When I asked some students about global warming research, the response I got was the slightly fed up suggestion that there were no new frontiers left to explore in global warming research given the many existing studies. Is that really true though? On the contrary, is it not the case that the understanding and quantification of feedbacks between the various sub-systems inherent in climate systems through global warming research are becoming increasingly important issues that urgently need to be solved? Although writing "feedback" in katakana makes us feel like we understand it, in reality, it requires frontier research that crosses the boundaries of differing academic domains. This corresponds to interdisciplinary research, which often features in the slogans of external finance, and hopes are rising that it can be a field for youths,

who are less constrained by existing concepts, to excel. In other words, the current era calls for researchers who are able to organically make the connections in both directions, and not researchers who only deal with a single domain, like what we have been seeing until now. As a university faculty member, it would be a joy exceeding my expectations if this book were to spur youths in various fields of study, who shoulder the responsibility of shaping the next generation, to enter the field of earth climate system research.

As mentioned above, climatology is continuing its evolution from a descriptive field of study to dynamical climatology, a field that encompasses mechanisms. Given such a trend, we are increasingly aware of the need to reposition the field of climatology within the hierarchy of geography and physical geography. By writing this book, I have come to realize once again, the role that climatology has played up until now, as well as the potential it holds its interdisciplinary aspect.

In the four and a half years since I began writing in spring in 2008, there have been many occasions where the members of the climate research laboratory, including Researcher Tomoshige Inoue and Masamichi Ohba helped me in one way or another, such as through discussions and the creation of diagrams. In addition, Honorary Professor Yukinori Matsukura of the geomorphology department of University of Tsukuba provided invaluable advice while I was considering whether or not to write this book. Professor Akira Tabayashi of the human geography department, who sits on the editorial committee of the University of Tsukuba Press, never failed to encourage me from the start to the very end of this project, despite the times when I handed over the manuscript late.

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