

Atuhiro Sibatani

## Arbitrariness in Structure — Biology and Discrimination



Geboren 1920 in Osaka, Japan. Studium an der Universität Kyoto (Zoologie), Doktorwürden an den Universitäten Nagoya (Biochemie) und Yamaguti Medical School (Zellbiologie). Professor an den Universitäten Yamaguti Medical School (Ube; Biologie); Institut für Strahlenmedizin und Biologie der Universität Hiroshima (Biochemie und Biophysik); Kansai — Medizinische Universität (Osaka), (Biologie); Seika-Universität zu Kyoto (Biologie). Inzwischen seit 19 Jahren an der Csiro — Abteilung der Tiergenetik (später der Molekularbiologie) in Sydney. Veröffentlichungen: zunächst über Nukleinsäuren und Molekularbiologie, dann über Kritik der Naturwissenschaften sowie Entwicklungsbiologie (Musterbildung), schließlich über Emanzipation der Minderheiten und Strukturalismus in der Biologie. Ungefähr 20 Bücher auf japanisch und einige (teils selbst herausgegebene) Bände auf englisch und deutsch. Adresse: Kyoto Seika University, Faculty of Human Sciences, 137 Kinotyoo, Iwakura, Sakyoo-ku, Kyoto 606, Japan.

My plan in Berlin was (1) to look into the pattern formation in lepidopteran wings, and especially, to re-evaluate those experiments done during the 1930s and 1960s in Germany; (2) to write a few articles on structuralism in biology, as a basis for a few chapters of a book on the same subject; and (3) to study the interaction between the followers of Hegel and Goethe in the light of the contemporary political environment in Germany.

However, when I came to Berlin, I had not finished some of the work I had been carrying out in Japan. Moreover, my commitment to many publications and meetings left a number of deadlines falling within the period of my term in Berlin. As a result, I had to make some modifications according to outside requirements, and also in order to fully enjoy the expertise and other facilities available at the Wissenschaftskolleg and its fellows this year.

Before coming to Berlin, I thought I had almost finished my book on

Discrimination (in Japanese), the subject I am interested in as a scientist belonging to a minority criticizing the mainstream in biology. Among discriminated minorities in Japan, the most important group are the so-called *burakumin* or the lowest caste in feudalistic Japan, which was legally liberated following the Meiji "Restoration" (1868) but, nevertheless, has been continuously discriminated against in modern and contemporary Japan. On the other hand, homosexuality is the subject of social (but not legal) discrimination in Japan, but its liberation has not been sought as eagerly as for other discriminated groups such as ethnic minorities, the handicapped, women, the aged, etc. So the homosexuals in Japan are discriminated against even in the liberation movement for the discriminated groups, which is now causing some concern in relation to the newly promulgated, highly discriminative law for AIDS control. In Berlin, the reference material on homosexuality is much more easily available than in Japan, and this year I could get, through the fellow François Ewald, some useful material written by Michel Foucault on this subject. Because of the lack of time, I have not been able to study some of the leads which emerged during the study of this problem, such as anonymity and male-to-male comradeship connected to the use of violence. Also, the fellow Butrus Abu-Manneh, himself a minority in Israel, has given me useful suggestions on the subject. However, the reference to this new material helped me very much in winding up the book on discrimination mentioned above, especially in interpreting the contemporary liberation movement of *burakumin* in Japan.

I have used, as the key concept, arbitrariness in human discrimination. The *burakumin* have been fighting against discrimination by rightly pointing out the groundlessness of the discrimination against them in Japanese society. However, I have pointed out that exactly the arbitrariness or groundlessness is the feature of this or any discrimination, so that the strategy and conceptualization taken by the movement for their liberation are unfortunately ill-conceived. I finished this book in Berlin and it is now being printed in Japan.

The arbitrariness which I used in the above work derives from my continued project on structuralism in biology, so that I have made my contribution to the contemporary social problem in Japan via my endeavour in biology. I use the concept of arbitrariness borrowed from the linguistic theory of Saussure almost as the axiom in my attempt to reconstruct biology. This concept has led us to perceive the multiplicity in structure, which has divorced us, my colleague in Japan Kiyohiko Ikeda and myself, from the structuralists Lévi-Strauss and Piaget, and brought us close to Foucault, on the one hand, and helped us distinguish our structuralism clearly from holism. While Ikeda is theoretically working out logical con-

sequences of using the axioms of arbitrariness and multiplicity of structure in biology, I have been trying to express these theoretical results in more concrete terms in my phenomenological analysis of arbitrariness in human and biological processes, using materials from fields including molecular, developmental and behavioural biology. The biologists among this year's fellows, including Günter Albrecht-Bühler, Wulf Schiefenhövel and Christian Vogel have given me many useful suggestions, including Schiefenhövel's work on the ritual rather than amorous aspect of homosexuality in Papua New Guinea. In this context, I have also enjoyed contacts with German ethologists who have traditions somewhat different from their anglophone colleagues to whose works I had been more thoroughly exposed. I have thus enjoyed, and been inspired by, the contacts with Prof. Dietmar Todt and Randolf Menzel of the Free University of Berlin, the correspondence with Prof. Niklaus Peters of the University of Hamburg and Prof. Alfred Stamm of the University of Luneburg, as well as the association with Dr. Jürgen Lange of the Aquarium Berlin.

In Berlin, I first wrote a rather lengthy paper (already published) on analysis of wing pattern in certain lycaenid taxa (Lepidoptera) and concluded that the pattern formation in lepidopteran wings involves some arbitrary structure which mediates between the physical process in pattern formation and the wing patterns one can observe on the adult wing. However, I have failed to go into the analysis of experimental work done in Germany during 1930-1970.

I was invited to talk about my approach to structuralism in biology, besides in FU in July, also in Cornwall, U. K. in November 1988, at an international symposium on Gaia and evolution, and in Moscow, USSR, in April in another international symposium organized by the USSR Academy of Science on Important Problems in Evolutionary Biology. Both these meetings were organized by my colleagues in the U. K., who are active members of the Osaka Group for the Study of Dynamic Structures, a world-wide organization stemming from the international workshop I had organized in Osaka, Japan, in 1986. The group, I hope, will form a think-tank in the style of that small international group working in molecular biology in the later half of the 1950s. German scientists are very weakly represented in the group, and so far the situation has not changed during my stay in Berlin.

As for Goethe and Hegel, especially on their views about biology, I have not had much chance to meet scholars interested in this subject, so that, except for confirming the fact that Goethe's biology (including his *Farbenlehre*) is in line with our structuralist biology, I have not done very much. However, the original idea on the project was also of political na-

ture. I was interested in pursuing the interaction of the followers of these two scholars in the vein of finding out the relationship between the green and the red. This year, actual political situation in Berlin resulted in a coalition between the green and the red for the first time in Germany. I feel, therefore, that my problem consciousness was quite pertinent, and can only regret that I have failed to do any significant work on this line.