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## Sophie Houdart La cour des miracles. Ethnologie d'un laboratoire Japonais

[The Court of Miracles: Ethnology of aJapanese Laboratory] 2007, CNRS Éditions, 335 pp.

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In this very absorbing book, Sophie Houdart flits ably from one role to another, becoming in turn an ethnologist, an anthropologist and a sociologist of science. Laboratory life – that of humans both divided and united by culture (national, scientific, professional) and that of other species, in this case the drosophila fly – is enriched through a totally cultural vision of scientific knowledge (Pickering 1992; McCarthy Doyle 1996; Goodwin 1994).

The author tells the fascinating story of how a Japanese research laboratory describes and characterizes the homosexual gene of the drosophilia fly in the 1990s. In fact, man is believed to be the ultimate branch on the tree of life. The research hypothesis is that the "forebears" of our sexual behaviour patterns can be found in animals, bacteria or flies. In its behaviour and in its genetic mutations, the fruit fly manifests many intermediate stages between hetero-and homosexuality. Above all, it focuses on the laboratory manager, Yamamoto, who evolves from being a lover of insects (mushi mushi maniac) according to the "naturalistic" culture prevalent in Japan, and becomes a laboratory scientist in line with the more "rational" western vision, without ever losing his cultural identity.

The book opens with the film: Sexual behaviour - Mechanisms and evolution - which Yamamoto made to allow us to observe both the heterosexual and fluctuating behaviour of the fly. Does nature communicate through the images or is this the story as told by Yamamoto? He tells us about his drosophila fly and we can see it, we watch with him more than 30 scenes narrated by the author: all appears simple, evident. In the visual tale, the story seems like a rosary of natural facts. The actors in the film are the flies, which demonstrate both hetero and homosexual behaviour. Then come the genes which embody these characteristics, then the areas of the flies' brains where these genes act. Then come Yamamoto and his story, the researchers who work with him, the other laboratories, his centre collaborates with. The film, like the book, shows how nature and culture are questioned. The "natural" history of the drosophila becomes the "cultural" history of Yamamoto, his laboratory, his successes and his problems. The author moves ably from one type of culture in practice to another: natural and mutant drosophila flies; types of genes (canoe, tamou, satori, fruitless, etc.); types of laboratory location - Japan, Hawaii, France; types of research practices - more interdipendent, more individualistic, more rational, more natural, more polyphonic, etc. In each difference, in each stage of the story, we see how the natural is transformed, and how each distance or nearness between the elements represents a cultural experience.

Houdart's book presents the tradition of laboratory life competently and innovatively, ably adding the cultural ingredient in its various forms and shades. The book is a play on mirrors, all the characters being observed through the eyes of the other characters: only through comparison and analysis of the reciprocal differences can the characteristics of the various actors emerge. The author goes on to highlight the cultural changes deriving from the fact that in the research field of ethnologists, anthropologists and sociologists of science, we find ourselves in the presence of non-humans not only in the form of technologies and artifacts (according to the consolidated ANT tradition) but also in the material form of other species, such as scarab beetles and flies, and even cells, molecules and genes which behave like active entities, repopulating the fields of inquiry in social sciences (Houdart and Thiery 2011).

Sophie Houdart begins by telling her personal story, that of a young PhD student in social sciences who arrives in Japan to study in a laboratory which had become a talking-point in the West. The author gives a detailed, very personal account of how she introduced herself into the laboratory environment, how she integrated with daily life in order to relate the group's working modalities, silences, personal pathways, their difficulties with the English language. The author speaks of the professional pathway of the laboratory manager, Yamamoto, a typically Japanese story, yet exemplary in its singularity. As related to the ethnologist, the anthropologist, the sociologist of science with the certain measure of rhetoric which one might expect and forgive in a scientist, Yamamoto is first and foremost Japanese and then a researcher, first a lover of insects and then a scientist. The text guides the reader through the adventurous metamorphosis of this naïf ethnologist who loves the mountains and insects, transforming him into an almost Western scientist capable of producing knowledge for articles in important international science magazines.

She then tells of how Yamamoto put together his team, how he set up other laboratories, how he gradually began to interact with Western colleagues, how he maintained the modalities of "naturalistic" knowledge which derived from his culture of origin. All this took place within the socialization to western scientific culture with which he needed to measure himself in order to export the Japanese cultural systems which through him had evolved into something new.

The insects from his mountain childhood lead him towards science. His love of nature, intrinsic to Japanese culture directs his footsteps towards rational science: from the mountain butterfly to the laboratory drosophila, from natural to artificial adaptation. Yamamoto's trip to Chicago does the rest, making it necessary for him to acquire a posture, a conduct, a psychic experience, a sense of perseverance, a disciplining of mind and body, as Foucault (1975) would say, thus transforming him from collector into electrophysiologist. In this transformation, Yamamoto also becomes one who has to master other people, genes, flies, colleagues, as well as mastering himself.

The book is divided into three parts. The first narrates the cultural transformations of the actors in the

field: how the foreign ethnologist from a European culture arrives as a guest in Yamamoto's laboratory, how Yamamoto himself evolves from being a lover of insects to scientist (after his long experience in the USA), and speaks of the differences between the Japanese laboratory and the second Hawaiian laboratory set up by Yamamoto, highlighting the cultural differences between the two working teams. The chapters in Part two introduce the anchoring to nature through the drosophila fly and its transformations in the multiple court of natural mutants: the court of miracles. In this part of the book, other cultural diversities enter the picture. Through a particular modality of comparison, adopting differences rather than similarities, the author tells of the modes of action exerted by humans on the drosophila. Two laboratories, one in France in which Yamamoto develops his project on the drosophila and the Japanese laboratory are compared. The two research experiences, the two teams, act differently when observing the drosophila's behavior, the diverse types of mutant flies (either more or less heterosexual or more or less homosexual). Also in this case nature is tested by cultures and diversities, with the polyphonics and multiple existences in the behavior patterns of humans and flies under examination: the ethnologist widens his field of observation populated by various subjects and watches the researcher who watches the drosophila, then watches the drosophila itself through the researchers experiments and reports. What is questioned here is the relationship between local and universal, between specific research practices and how these are represented reciprocally as a part of more universal scientific practices: local is different in the more general sense. In the third part, we are told that scientific practice is above all social practice. Houdart describes how Yamamoto exhibits his charisma, his way of orchestrating the events, his authority over the group and at the same time how order is established within the laboratory, how objects are distributed in practical terms and how the human actors dominate the others (the flies and genes) in the process. Yamamoto has produced his own practical pedagogy (Kaiser 2005).

In conclusion, it may be said that Houdart's work is not a comparison, not a multi-situated ethnography, not a case study but rather all of these in part. It can certainly be said that it is rich in bibliography, rich in literary composition, wide-reaching in its narration of the research field and competent in its use of scientific terminology, accurate in its use of the many citations - from literature, philosophy, science which open the chapters. It is a very French book in the certain sarcasm and recurring elegance which sustain the narrative. It is a book which certainly continues along a pathway rich in possibilities in terms of the cultural studies of practices and knowledge, and which young academics (of social sciences, but also biologists, physicists, chemists, etc.) from the U.K., Italy, France, Japan, the U.S.A., Spain, etc., ought to read to obtain a close-up of the lives of others (both human and non-), which are also theirs, and ours.

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