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From the 1950s syndrome to the 1970s diagnose

Environmental pollution and social perception:
How do they relate?

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abstract: A key problem of environmental history is to find adequate models for the relationship between environmental pollution and its social perception. The paper discusses Swiss environmental history between 1950 and 1980 in terms of this question. Like other industrial countries, in the decades after 1950, Switzerland saw economic growth accompanied by growing impacts on the environment. Christian Pfister has described this process as the „1950s syndrome". Considering the impressive data, with which this development can be outlined, the environmental turn of the 1970s has usually been explained as a direct reaction to the growing environmental stress. However, environmental pollution, most probably is a necessary disposition, but not at all a sufficient reason for changing perceptions of the environment. For: both, the perception of environment as a problematic issue and the definition of its social importance take place within a social field and depend on a multitude of social factors. In analogy to Pfister's „1950s syndrome" these processes of assessing the problem and of seeking for adequate solutions could be grasped with the term „the 1970s diagnose".

Introduction[1]

A key problem of environmental history is to find adequate models for the relationship between environmental pollution and its social perception. Research so far, mainly done in the fields of economics and psychology, has tended to focus on the correlation between environmental consciousness and social action rather than on the connections between environmental pollution and social perception. This gap in knowledge should be seen as a challenge to environmental history, as well as a chance for the students of the field to contribute substantially to the environmental discussion. After all, where can we learn about this relationship, if not in the past?

The aim of this paper is to discuss the problem of „pollution and perception" using the example of Swiss environmental history after 1950. In a first step, some quantitative data will be presented indicating the processes of environmental pollution and social perception in Switzerland. In a second step, some patterns of explanation for the outlined development will be worked out. Finally, in a third step, the findings will be generalised in order to address some theoretical issues concerning environmental history as a discipline.

1. The „1950s syndrome" and the „1970 diagnose": some evidence

The Swiss case is likely to be quite representative for the development in most industrial countries.[2] In Switzerland, in the decades after 1950, economic growth was accompanied by

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growing impacts on the environment. Christian Pfister has labelled this process the „1950s syndrome".[3] The meaning of this term has been defined by Pfister as follows:

„From the 1950s onward, the consumption of energy, the GNP, the surface area of settlements, the volume of garbage, and the pollution of air, water and soil were undergoing the crucial growth spurt regarding today's situation. All of the profound changes accompanying this process and affecting the way of production and living are called the '1950s syndrome'."[4]

The environmental impact of the 1950s syndrome can be documented nicely by quantitative data on a international as well as on a national level. Figure 1 shows the development of the concentration in the atmosphere of gases responsible for the greenhouse effect over the last 200 years. Figure 2 assembles some indicators for the 1950s syndrome in Switzerland. Typically, the graphs in these two figures, as well as many others that could be generated in their place, are starting to soar in the 1950s. Bearing in mind such impressive data, as well as the permanent reference to the fast-increasing pollution by the environmental activists, the intensifying of environmental consciousness and the growing impact of the environmental movement has frequently been explained as a direct reaction to this growing environmental stress.
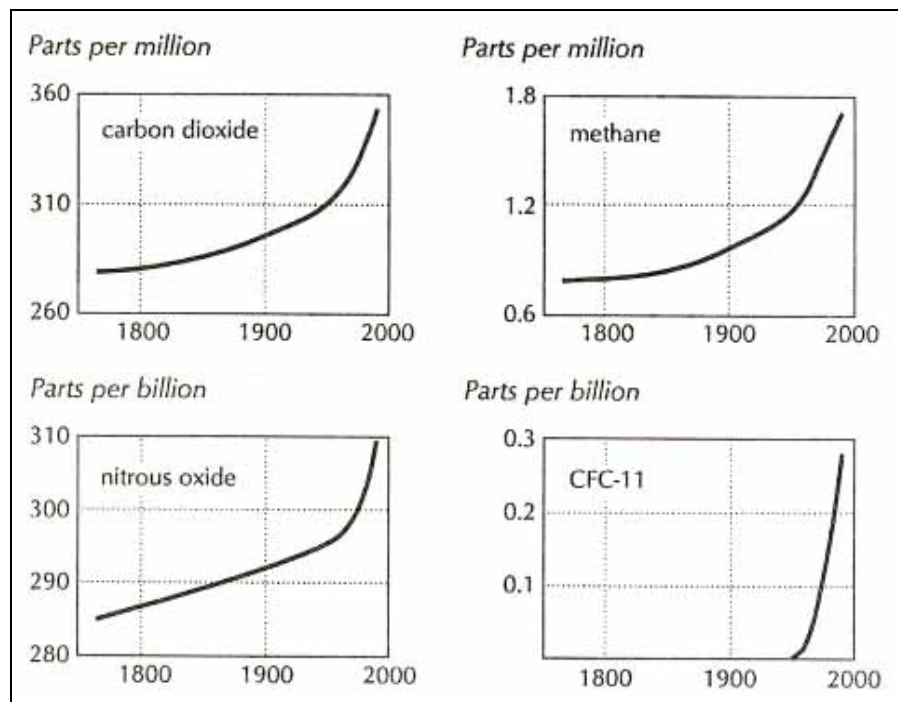

Figure 1: Global Greenhouse gas concentrations
(Source: World Metrological Organization, Meadows et al. 1992, p. 94.)

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[2] This generalization is surely right in respect to the environmental pollution, it might be less to the point in regard to the social perception.

[3] Pfister 1995.

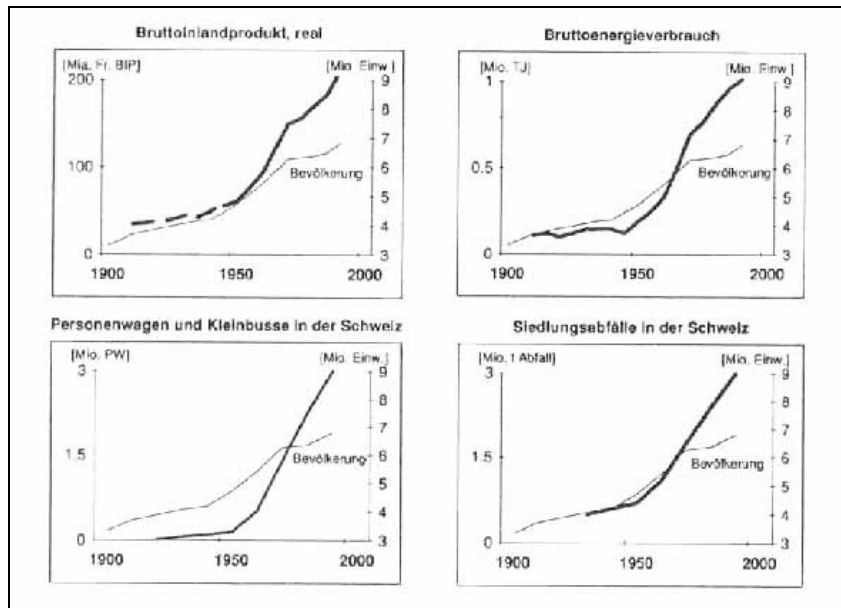[4] Pfister 1995, p. 23. *My translation*.

Figure 2: 1950s Syndrome in Switzerland (Source: Pfister 1995, p. 58.)

However, a close look at some indicators of environmental awareness shows that such an explanation does not hold. Following this model, one would expect pollution and the respective awareness to rise more or less simultaneously, with the awareness, perhaps, lagging somewhat behind. But available data provides a completely different picture. Figure 3 shows a graph representing protest-event data collecting protest-events with regard to environmental problems in Switzerland after World War II.[5]
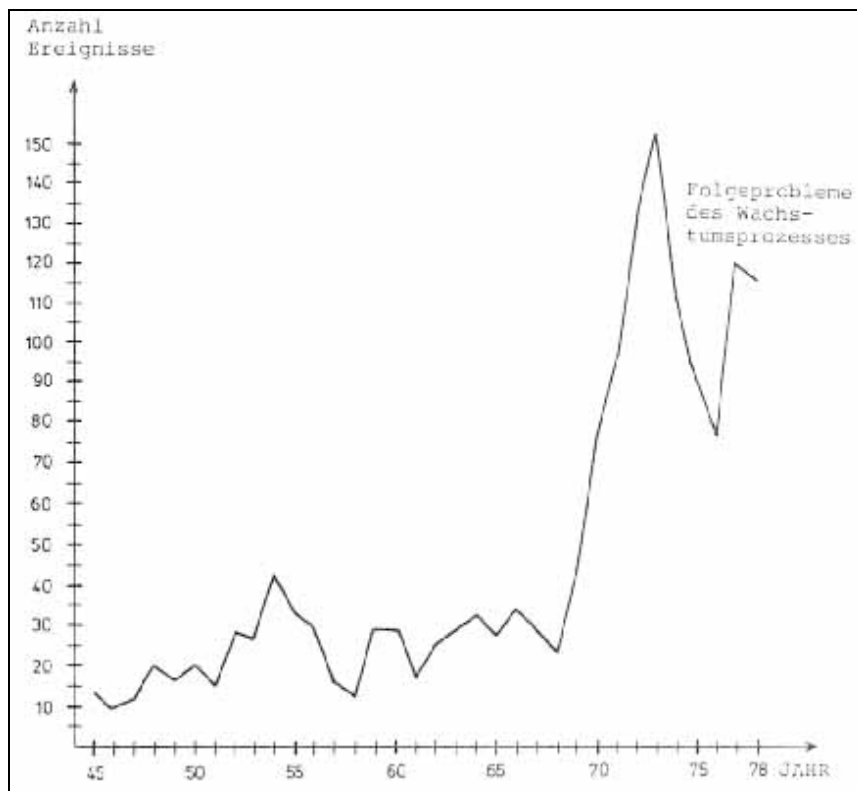

Figure 3: Protest events in Switzerland (Soruce: Kriesi et al. 1982, p. 108.)

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[5] For data till 1989 see Zwicky und Schöni 1993

The protests were mainly directed against traffic, energy and building projects or conducted in favour of nature conservation. The graphs in Figure 4 represent the development of the number of members of two Swiss environmental organisations, the Schweizerische Bund für Naturschutz (SBN), and the WWF Switzerland in the 1960s and beginning 1970s. In the data of these two figures a clear change around the year 1970 is identifiable. Again, many other indicators could be investigated, e.g. the number of environmental organisations, the number of newspaper articles related to environmental issues, the scientific output, or the environmental legislation. The results of such investigations are similar to the one presented.6
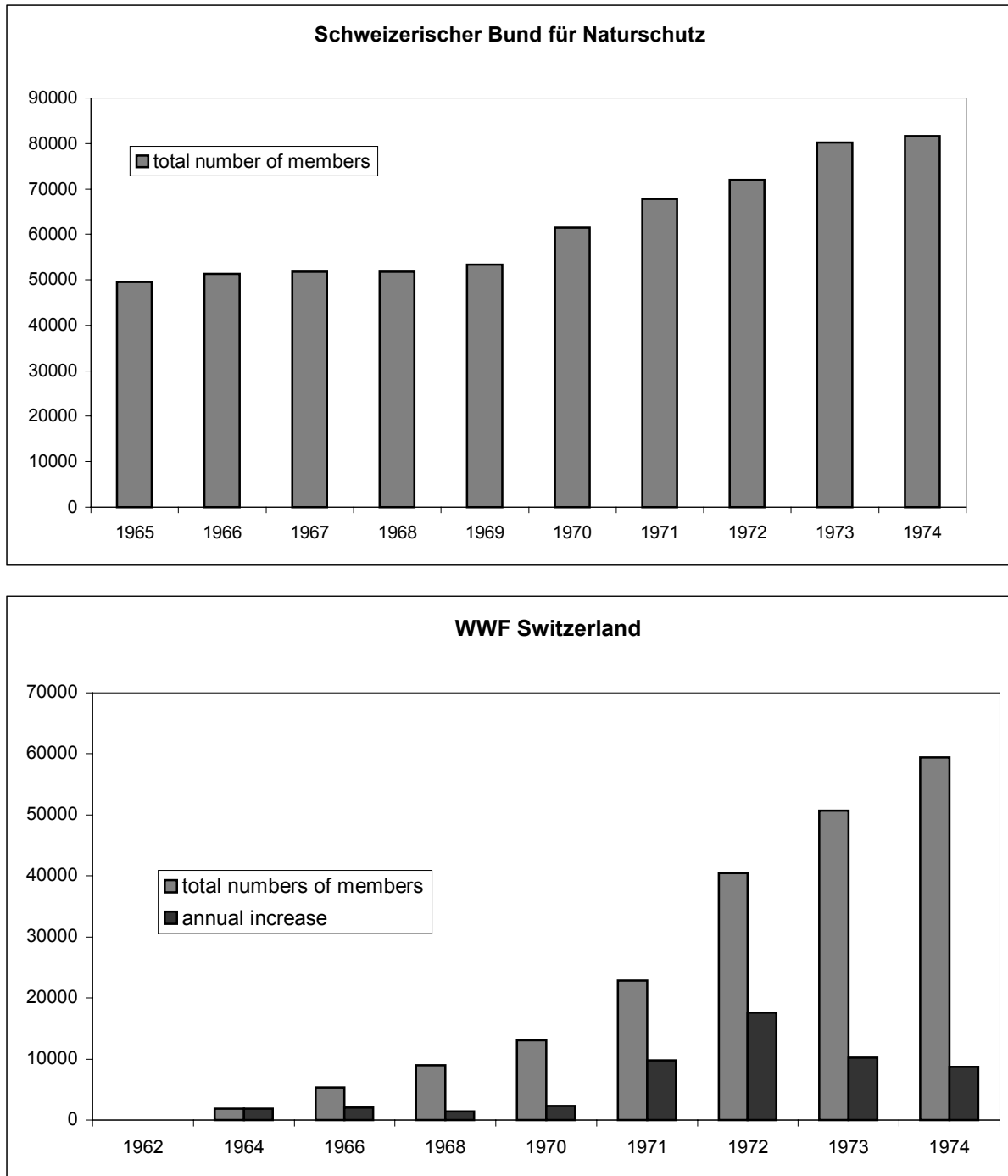

Figure 4: Members of environmental movements in Switzerland 1962-1974
(Source: Kupper 1998, pp 30-33)

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6 See Kupper 1998, pp 24f.

This means that environmental pollution and environmental awareness emerged quite differently. Figure 5 tries to visualize this discrepancy by mean of idealistic graphs for the 1950s syndrome and for which, what shall be labelled, „the 1970s diagnose". The graph for environmental pollution indicates the 1950s syndrome, while the graph for environmental awareness indicates the 1970s diagnose.

These findings suggest that there is no direct connection between pollution and perception. Rather, one has to step back and first of all learn to understand these phenomena as two widely separate developments. Apparently, this result can make oneself feel a little bit uneasy. For, if one accepts the assumption that environmental pollution does not necessarily lead to an increase in environmental awareness, then other explanations for the problems at hand have to be found.
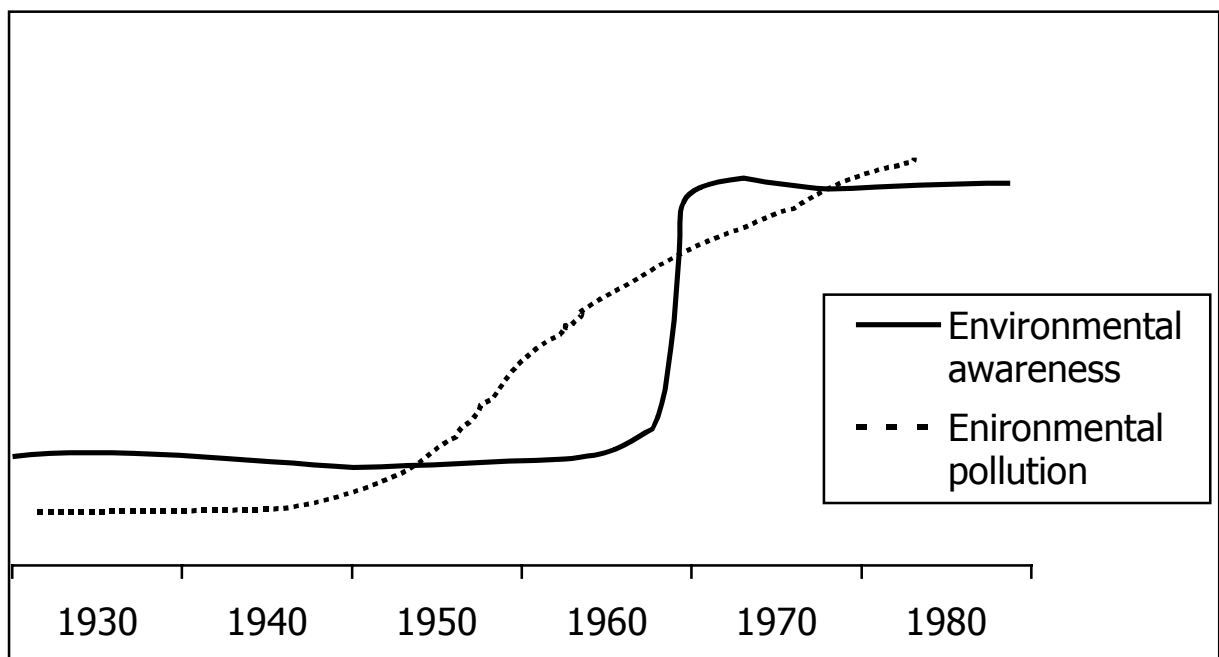

Figure 5: Idealistic graphs of the 1950s syndrome and the 1970s diagnose

2. The 1970s diagnose: a plausible explanation

Thus, after having avoided the short-circuit of pollution and perception, which is a somewhat vulgar-behaviouristic pattern of challenge and response, one has to wonder that there is such a thing as a growing environmental awareness. In the 1980s, the German sociologist Niklas Luhmann stated radically that it is only society, which can endanger itself, but not the environment. Luhmann has argued.

„The supply of oil diminishes, rivers are becoming too warm, forests die, the sky overshadows and the sea gets polluted; all that, if true or not, does not generate social response as a merely physical, chemical or biological fact, as long as society does not communicate about it."[7]

Luhmann stresses the importance of social communication in defining what makes social issues out of mere facts. In this respect, Franz-Josef Brüggemeier has chosen an interesting approach in putting forward the so-called „capacity thesis". According to this thesis, environmental pollution, as well as other potential „problems", find more resonance and

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[7] Luhmann 1986, pp. 62f. *My translation.*

may become political issues, only if, at the same time, in different social contexts certain capacities are built up.[8] On that score, social movements are of particular importance, and so are Science and the media. However, as long as the different social contexts are not connected, it remains quite impossible for actors, standing in one single context, to assign the specific problem as vital one. Therefore, still according to this thesis, a critical mass has to be obtained in order to bring a problem onto the political agenda. Or, in other words, a critical mass is mandatory to single out a specific problem out of the immense quantity of potential troubles and to transform it into an essential problem for society as a whole.

Just to make a slight detour: apart from bringing these aspects into focus, this approach could serve as a boundary object for a trans-disciplinary discussion between social and natural sciences. Natural sciences deal with similar processes, e.g. chemical titration of acids with bases, respectively vice versa, or the acid buffering in soils. Although, there will be substantial differences when it comes to question, how determinate such processes are.

In any case, for the historical analysis of the years around 1970, the „capacity thesis" fits well. In the 1960s, ecology and cybernetics started to become more and more powerful sciences, influencing the scientific modelling of the relationship between man and environment strongly. Scientific findings were popularised through the publishing of quite a number of so-called doomsday books. „The limits to growth", Meadow's report to the „Club of Rome" of 1972, was only the most famous out of a whole series of similar publications.[9] In addition, established as well as newly founded environmental organisations and movements sensitised the public, and the media developed an increasing interest in the topic. In Switzerland, the result was overwhelming. In 1971, in a popular voting over 90% agreed to a constitutional amendment, adding an environmental act to the Swiss Constitution. And throughout the 1970s public opinion identified the environmental pollution as the most severe social problem.[10]

However, this process of rising environmental awareness was not only a question of (critical) mass, but also of innovation. During the turning years around 1970, a fundamentally new view of the environment was developed, popularised and implemented into common sense, a process, which I call the 1970s diagnose. Three innovations, introduced in this diagnose, were of particular importance: first, the thinking in complex, interdependent and regenerative systems, most prominently put forward in 1972 by the first study to the Club of Rome „The Limits to Growth"; second, the adoption of a global perspective on the problems, which was reflected in the metaphor of the „spaceship earth" becoming widespread towards the end of the 1960s; and, third, the analysis over long periods of time, trying to understand the scope of current developments by embedding them into long running trends. In the German-speaking world this was accompanied by the invention of the new word „Umweltschutz" (environment protection), bringing together various items, till then separated. Evidences of the 1970s diagnose can be found in countless spheres, e.g. in popular expressions like the mottoes: „think globally, act locally", or „it's five-to-twelve".[11]

Thus, so far there are critical mass and potential of innovation. But the analysis is still not complete before adding one more aspect to the picture, namely, before locating the change of social perception of the environment into a wider framework of social change.[12] Looking once more at the Swiss case around 1970, one can state that not only the social perception of the environment was changing in those years, but also the understanding of the role of gender. Furthermore, a generation gap was opening up, and the north south divide as well

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[8] Brüggemeier 1998.
[9] Meadows et al. 1972. See Kupper 2002.
[10] See Kupper 1998, pp 24-28.
[11] See Kupper 1998, pp 24-28.
[12] A theoretical approach, which could be valuable in this respect, has been presented by Siegenthaler 1993.

as the east west polarity was re-thought, as were many other things, too.[13] Thus, the Swiss society of the late 1960s and the early 1970s was particularly open to social change. This openness made collective learning processes possible such as the 1970s diagnose, making ideologies change fundamentally.

To sum up: Environmental pollution was most probably a necessary disposition but surely not a sufficient reason for changing perceptions of the environment. Pollution has rather to be seen as an offer to society to reshape its relationship to nature. The perception of the environment as a social problem and the definition of its meaning take place within a social field and depend on a multitude of social factors. Thus, in order to get a more realistic picture of these processes we have to look closely at the social processes of problem definition and solution seeking, and hence to examine discursive currents and social organisations in a wider framework of social change. The „1970s diagnose" terms such a process of mental reshaping of the world.

3. Environmental History as Cultural History

If one accepts that there is a gap between environmental pollution and its social perception as well as that this gap is not self evident, but needs to be sensibly explained, what would this observation mean for the field of environmental history in general? A feasible answer to this question is to envisage the overall perspective of environmental history within the field of cultural history and not within the field of natural sciences or history. From this assumption follows that the key question of environmental history has to focus on the social production of the distinction between culture and environment, or man and nature. This approach implies that this distinction is understood not as a god-given fact, but as a product of social interactions.

There should, of course, not be denied that there is a thing such as a nature independent of man, existing beyond any discourse. This nature does exist, no doubt. And it has a life of its own. A fact, of which so-called natural disasters regularly remind us. However, this - lets call it - „original" nature should not carry the environmental historians too much. As Marc Bloch once said the skilled historian resembles the legendary cannibal: „Where he smells human flesh, he knows his booty can't be too far."[14] In this sense, what environmental historians primarily should be out for is not to reconstruct past natures or environments, but to re-construct the imagined natures or environments of past societies. In doing so, the following questions could be of help: What did these imagined natures look like, and how were they produced and stabilised? Who produced them and what for? Which social struggles were imprinted in those imagined natures, and how did they affect the social distribution of power? And, finally, we'll have to ask in what way these imagined natures were subject to a constant social re-production and in what way and under which conditions they could be changed.

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[13] See König et al. 1998.
[14] Bloch 1980, p. 45. *My translation*.

Bibliography

Bloch, Marc 1980: *Apologie der Geschichte oder der Beruf des Historikers*, 2nd ed., Stuttgart: Klett-Cotta.

Brüggemeier, Franz-Josef 1998: *Tschernobyl, 26. April 1986: Die ökologische Herausforderung*, 20 Tage im 20. Jahrhundert, München: dtv.

König, Mario, et al. (ed.) 1998: *Dynamisierung und Umbau. Die Schweiz in den 60er und 70er Jahren,* Die Schweiz 1798-1998: Staat - Gesellschaft - Politik, 3, Zürich: Chronos.

Kriesi, Hanspeter, et al. (ed.) 1982: *Politische Aktivierung in der Schweiz 1945-1978*, Diessenhofen.

Kupper, Patrick 1998: *Abschied von Wachstum und Fortschritt: Die Umweltbewegung und die zivile Nutzung der Atomenergie in der Schweiz (1960-1975)*, Preprints zur Kulturgeschichte der Technik, No 2, Technikgeschichte ETH Zürich.

Kupper, Patrick 2002: „*Weltuntergangs-Vision aus dem Computer*": Zur Geschichte der Studie „*Die Grenzen des Wachstums*" von 1972, in print.

Luhmann, Niklas 1986: *Ökologische Kommunikation: Kann die moderne Gesellschaft sich auf ökologische Gefährdungen einstellen?*, Opladen.

Meadows, Donella H., et al. 1972: *The limits to growth: a report for the Club of Rome's project on the predicament of mankind*, New York.

Meadows, Donella H., et al. 1992: *Beyond the limits global collapse or a sustainable future*, London: Earthscan Publications.

Pfister, Christian. (ed.) 1995: *Das 1950er Syndrom: der Weg in die Konsumgesellschaft*, Publikation der Akademischen Kommission der Universität Bern, Bern, Stuttgart, Wien: Verlag Paul Haupt.

Siegenthaler, Hansjörg 1993: *Regelvertrauen, Prosperität und Krisen. Die Ungleichmässigkeit wirtschaftlicher und sozialer Entwicklung als Ergebnis individuellen Handelns und sozialen Lernens*, Tübingen: Mohr.

Zwicky, Heinrich and Walter Schöni 1993: *Umwelt als Aktivierungsgrund politische Aktivierungsereignisse zu Umwelt-, Verkehrs- und Wohnfragen in der Schweiz, 1945-1989*, Zürich: Nationales Forschungsprogramm Stadt und Verkehr.

1. Barbara Orland, Zivilisatorischer Fortschritt oder Kulturdeformation? Die Einstellung des Deutschen Kaiserreiches zur Technik. Paper entstanden nach einer Veranstaltung der Deutschen UNESCO-Kommission und des Hessischen Volkshochschulverbandes zu Jugendstil und Denkmalpflege, Bad Nauheim 1997. *Preprints zur Kulturgeschichte der Technik / 1998 / 1.*

2. Patrick Kupper: Abschied von Wachstum und Fortschritt. Die Umweltbewegung und die zivile Nutzung der Atomenergie in der Schweiz (1960-1975). Lizentiatsarbeit Universität Zürich. Eingereicht bei Prof. Dr. Hansjörg Siegenthaler, 1997. *Preprints zur Kulturgeschichte der Technik / 1998 / 2.*

3. Daniel Speich, Papierwelten. Eine historische Vermessung der Kartographie im Kanton Zürich des späten 18. und des 19. Jahrhunderts. Lizentiatsarbeit Universität Zürich. Eingereicht bei PD. Dr. David Gugerli, 1997. *Preprints zur Kulturgeschichte der Technik / 1998 / 3.*

4. David Gugerli, Die Automatisierung des ärztlichen Blicks. (Post)moderne Visualisierungstechniken am menschlichen Körper. *Preprints zur Kulturgeschichte der Technik / 1998 / 4.*

5. Monika Burri, Das Fahrrad. Wegbereiter oder überrolltes Leitbild? Eine Fussnote zur Technikgeschichte des Automobils *Preprints zur Kulturgeschichte der Technik / 1998 / 5.*

6. Tobias Wildi, Organisation und Innovation bei BBC Brown Boveri AG 1970-1987. Lizentiatsarbeit Universität Zürich. Eingereicht bei Prof. Dr. Hansjörg Siegenthaler, 1998. *Preprints zur Kulturgeschichte der Technik / 1998 / 6.*

7. David Gugerli, Do accidents have mere accidental impacts on the socio-technical development? Presentation at the Forum Engelberg, March 1999. *Preprints zur Kulturgeschichte der Technik / 1999 / 7.*

8. Daniel Speich, Die Finanzierung ausserordentlicher Arbeiten am Linthwerk. Historischer Bericht im Auftrag der Linthkommission. *Preprints zur Kulturgeschichte der Technik / 1999 / 8.*

9. Angelus Eisinger, Die Stadt, der Architekt und der Städtebau. Einige Überlegungen zum Einfluss der Architekten und Architektinnen auf die Stadtentwicklung in der Schweiz in den letzten 50 Jahren, Referat BSA Basel 24.06.1999. *Preprints zur Kulturgeschichte der Technik / 1999 / 9.*

10. Regula Burri, MRI in der Schweiz. Soziotechnische, institutionelle und medizinische Aspekte der Technikdiffusion eines bildgebenden Verfahrens. Studie im Rahmen des Projekts „Digitalizing the human body. Cultural and institutional contexts of computer based image processing in medical practice. The case of MRI in Switzerland". *Preprints zur Kulturgeschichte der Technik / 2000 / 10.*

11. Daniel Kauz, Wilde und Pfahlbauer. Facetten einer Analogisierung. *Preprints zur Kulturgeschichte der Technik / 2000 / 11.*

12. Beat Bächi, Diskursive und viskursive Modellierungen. Die Kernkraftwerk Kaiseraugst AG und die Ausstellung in ihrem Informationspavillon. *Preprints zur Kulturgeschichte der Technik / 2001 / 12.*

13. Daniela Zetti, Three Mile Island und Kaiseraugst. Die Auswirkungen des Störfalls im US-Kernkraftwerk Harrisburg 1979 auf das geplante KKW Kaiseraugst. *Preprints zur Kulturgeschichte der Technik / 2001 / 13.*

14. Patrick Kupper, From the 1950s syndrome to the 1970s diagnose. Environmental pollution and social perception: How do they relate? *Preprints zur Kulturgeschichte der Technik / 2001 / 14.*