

Media, Ethnology and Cybernetics¹

Magic can not be explained. Magic can only be practiced, as you all well know.

Heinz von Foerster

The ethnological research trips of not only writers like Michel Leiris or Antonin Artaud, but also the expeditions that anthropologists took in the 1940s – such as those of Gregory Bateson and Margaret Mead to Bali, Maya Deren to Haiti, or Jean Rouch to Mali and Niger – literally ended at the wisdom of the gods. An unexpected interference of culture-technical effects stepped between the filmmakers and the objects of their anthropological studies. Even though the filmic research reports are only intended to impart insights about culture and the cultural techniques of foreigners, they are always also records of experiences with the technical conditions of one's own culture and own knowledge. Bateson and Mead, as well as Deren or Rouch, saw themselves suddenly exposed in the cinematographic space of their film shoots on trances and dances to a magic that was a consequence of their misunderstanding of their own Western cultural techniques. In the search for coherent cultural patterns – such as Margaret Mead has demanded¹ for a new anthropology – researchers have seen themselves confronted with the conditions of their own subjectivity since the 1940s as if they were looking in a mirror. Those who were not able to keep a keen eye on the difference between the mirror and the image, between the recording technique and the image, and between the technical picture and cultural imagination in their observations could easily imagine that they had been entangled in the dealings of spirits and gods.

The film material that Gregory Bateson and Margaret Mead brought back from Indonesia at the beginning of the 1940s represents a milestone in the history of anthropology. This is because the two researchers thought that they had found the model of a non-aggressive societal dynamic on Bali and therefore — anachronistic to all of the global political escalation — discovered a model of non-competing social behavior. So the trip could very much have been understood as a mission of peace in dark times. However, the Balinese recordings primarily caused a sensation because they represented the basis for a future dynamic anthropology. During their research in New Guinea during the 1930s, Bateson and Mead had already observed behavior patterns among the youthful villagers on the Sepik River that they described as “schismogenetic.” This word means processes of progressive cultural differentiations that intensified and spread through symmetrical or complementary

inter-subjective feedback. Examples of this are male and female behavior developed in everyday life through the play between voyeurism and exhibitionism, in the back and forth of the relationships and the gazes. As the two anthropologists were able to demonstrate, cultural identity can be comprehended as an inter-relation and as interplay.

Since this time, anthropology no longer only focuses on exploring existing structures of an unknown society but discovering according to which recursive processes the human behavior in a society is differentiated into certain cultural or even moral types. Instead of the simple habits, rites, rituals, and forms of relationships, the goal of the anthropological studies was the pattern that became visible behind all changeable behavior: the rules of transformation. The charm in the heart of darkness.ⁱⁱ

Bateson had received a Guggenheim fellowship for researching a theory of social change due to the New Guinea research. Its precise wording was: "A formulation of a nucleus of theory relating to concepts of culture, personality and character formation and the extension of this nucleus to cover the phenomenon of cultural change."ⁱⁱⁱ On the basis of their research, Mead and Bateson were invited as anthropologists to the exclusive Macy Conferences together with physicists, mathematicians, and neurologists to research "circular causal and feedback mechanisms in biological and social systems." During the course of these conferences, cybernetics was born as a concept and in terms of epistemology. Issues of modeling and regulating social relationships and social change determined this most important American research program for a wartime and postwar world that had gotten out of control and was to become predictable again with the help of electronic machines. Similar to navigating on the ocean – the master pattern of all cyberneticists and helmsmen, behavior was to be understood as a consequence of situational evaluations and corrections. The observation of this behavior was expected to adhere to related actions in hierarchies of logical and temporal orders; only in the course of time, the willful or intrinsic "value" pattern emerged beyond the individual actions.^{iv}

Consequently, cinematography in its temporal organization of all events initially promised to be the ideal recording instrument for ethnologists. However, the Bateson and Mead's experiment of realizing the scientific methods of anthropology with filmic means^v had initially just proved to be an "unexpected quantitative leap."⁶

From their stay between 1936 and 1939, Mead and Bateson brought back 25,000 photographs and about 22,000 feet of 16mm film material with a total of more than 12 hours that they intended to analyze as the basis of their studies on trances and dances in Balinese rituals. What was missing was the corresponding leap from qualitative to methodical. Only upon their return to New York and after viewing the material, the two researchers realized that the recordings would just be the necessary preparatory work for the medial revolution of anthropological paradigms. The montage of the film, which assumes the structural organizational principle of the coupling, revealed itself as an unsolved problem. They lacked the specific convention or criterion to scan the uniform calmness of the Balinese images for significant moments and events in the cutting room, which would have made the circumstances and behaviors visible and would therefore have suggested some type of editing principle. In the pictures of everyday life scenes, rituals, and trance dancing – which were recorded with every type of light, from a great variety of perspectives, and at different speeds – no coherent units or elements that would have organized the material can be determined at first sight. However, this would have been in keeping with the requirement of scientific systematization in structural anthropology. At the beginning of his universal ethnological study apparatus, Claude Lévi-Strauss made the comment: " ... no matter in which area: a system of meaning can only be established on the basis of the discrete quantity."⁷

Bateson and Mead had selected an analog medium for recording at the same exact time as the avant-garde of anthropologists was working on formalizing reality to strict binarity. Claude Lévi-Strauss, who in the early 1940s taught at the New School for Social Research in Manhattan – where Bateson also lectured – developed his methods of structural anthropology in analogy to linguistic science. As Lévi-Strauss observed with "a little bit of melancholy and (...) much envy," the latter had just entered into a "technical cooperation with the engineers of a new science that is called cybernetics."⁸ Just as the linguists differentiated the phonemes in the language, Lévi-Strauss discovered "differential elements" and "opposing pairs" in the ethnological analysis. One example of these is the kinship relationships, to which certain types of behavior could be associated. Just as Freud had demanded the decoding of dream contents according to their symbolic relationships instead of their pictorial

⁵ The program could not yet be called cybernetics at that time because Norbert Wiener's book, after which the research on feedback systems was named at the Macy Conferences, was first published in 1948. Also cf.

Hein von Foerster, *Circular Causality. The Beginnings of an Epistemology of Responsibility*. In:

idem. *KyernEthik*, Berlin, 1993. Pp. 109-125. pg. 115.

⁶ Margaret Mead, *Blackberry Winter*, Hamburg 1978 pg. 184.

⁷ Claude Lévi-Strauss, *Mythologica I. The Raw and the Cooked*. Frankfurt/Main 1971. pg. 77.

⁸ Claude Lévi-Strauss, *Structural Anthropology I*, Frankfurt/Main, 1967. Pp. 82/83.

content, Lévi-Strauss noted that "the error of the traditional sociology, as well as the traditional linguistic science, lies in having examined the limbs and not the relationships between the limbs."⁹ Lévi-Strauss formalized these relationships in such a way that they were available for further processing by the "large electronic calculators"¹⁰ in an almost exemplary manner: The relations that Lévi-Strauss had discovered as cultural forms in society could all be coded and systematized as "+" or "-" so that "every culture (represents) a unique and exclusive case,"¹¹ yet still remains part of a general law. According to this system, an algorithm could be written for each culture that portrays its patterns, processes, communications, and transformations — the dream of every computer administrator.

For Lévi-Strauss, binary coding is a formalization that – and this is the surprising turn in his argumentation – owes its anthropological constant fundamental law to the unconscious activity of the mind. "If, as we think, the unconscious activity of the mind consists of forcing forms upon a content and when these forms are basically the same for all minds, the old and the modern, the primitive and the civilized (...) it is necessary and adequate to find the unconscious structure that is the basis of every institution or every customs in order to receive a principle of interpretation that is valid for other institutions and other customs."¹² In the activities of the mind that the human being is not aware of, such a structural mind is not only appropriate for the universal Turing machine; it can also realize and integrate all cultures of world history with its institutions and customs as a universal Hegel machine.

In contrast to Lévi-Strauss, Gregory Bateson – who relentlessly emphasized the value of "loose thinking"¹³ in the scientific process – had consciously kept the relationship between linguistic and ethnologic nonchalant and permeable from the start in order to avoid that a yet to be discovered universality of human relationship forms would prove to be a self-fulfilling prophecy of a European, Cartesian mechanism. He systematically risked his own intentionality in speaking and describing. In contrast to the elegant and elemental systematics of structuralism, he applied the Anglo-Saxon "trial and error": "If I am dealing with a vague concept and feel that the time is not yet ripe for expressing this concept in a strict sense, then I coin some loose phrase that stands for this concept. (...) I can continue using the vague concept in the valuable process of loose thinking — and yet, I continue to

⁹ Claude Lévi-Strauss, *Structural Anthropology I*, Frankfurt/Main, 1967, pg. 61.

¹⁰ Claude Lévi-Strauss, *Structural Anthropology I*, Frankfurt/Main, 1967, pg. 68.

¹¹ Claude Lévi-Strauss, *The View from Afar*. Frankfurt/Main 1993, pg. 161.

¹² Claude Lévi-Strauss, *Structural Anthropology I*, Frankfurt/Main, 1967, pg. 35.

¹³ Gregory Bateson, "Experiments in Thinking about Observed Ethnological Material" (1940) In: idem.: *Steps to an Ecology of the Mind: Collected Essays in Anthropology, Psychology, Evolution, and Epistemology*. Frankfurt/Main, 1981. pg. 114-132. Pg. 129.

be reminded that my thoughts are provisional."¹⁴ This is how Bateson threw out his significant nets, which he constantly refined, in which he wanted to capture the unknown wild thoughts and actions while he categorically remained in camouflage like a hunter. However, like the trap-setting Narcissus, he was to become the first victim of this strategy. But at first, Bateson wanted to also translate this method to film in order to oppose the French universalism of the mind with a psychosomatic ecology that – in the sense of Norbert Wiener – was to be seen as the cycle of the entire ecology system, the "organism-plus-environment."¹⁵ The researcher couple had gone to work in Bali with a correspondingly holistic approach to the question as they shared the labor. Margaret Mead had recorded the course of events in written notes while Bateson simultaneously photographed and filmed — sometimes assisted by anthropologist Jane Belo. A book of photographs, which the New York Academy for Science published as a special edition, contained the compilation of almost 800 photos in thematic tableaux of five to ten pictures that each had an extensive written commentary on the opposite page. The result was a fascinating typology of Balinese body images in one hundred chapters. In an exact description of the experimental design, Bateson listed which camera, which lens, which photo material, and even which developer chemicals he used, yet he never stated anywhere according to which — anthropological, filmic, or cultural — concepts of space and time he used the telephoto or wide-angle lens and when and according to which patterns he took series, when he took portraits, and when he used long-shot settings. To the degree in which he employed a rapid-winder starting in 1937, the tableaux in the book are similar to filmic frame sequences. However, they do not systematically illustrate movement sequences such as those occurring at regular intervals on the time axis. As much as the pictures determine the esthetics of the book, they are not – as announced – used as a media revolution of the scientific eye because they do not function as photography. In particular, series photography would have been required to work as a scientific method: the chronophotographic process had been developed for this purpose in the 19th century to fix the traces in which "behavior" is used as a visible surface of psychophysical interaction in a clear relationship to the time-space coordinate systems. Clocks are often integrated into the chronophotographic picture series in order to include the time on the document or the record of the experiments.

¹⁴ Gregory Bateson, "Experiments in Thinking about Observed Ethnological Material" (1940), *op. cit.* pg. 127.

¹⁵ Gregory Bateson, Margaret Mead, Steward Brand: "For God's Sake, Margaret!" in: *CoEvolutionary Quarterly*, June 1976, N. 10, pg. 32-44. Pg. 35: This was directed against the model of black boxes and input-output" that was asserting itself in the sciences: "What Wiener says is that you work on the whole picture and its properties. Now, there may be boxes inside here, like this of all sorts, but essentially your ecosystem, your organism-plus-environment, is to be considered as a single circuit."

Gregory Bateson made at least one differentiation during the recordings: Since very little film material was available, the "more active and interesting moments" were shot on film and everything else was taken with the camera¹⁶ Yet Bateson never states when he exposed the 16mm film with 16 and when with 24 pictures per second or in which situations he switched to slow motion. He simply wrote that "we were compelled to economize on motion-picture film."¹⁷

In contrast to all of the epistemological declarations of intention, the recordings from Bali are missing the transformation rules. The methods behind Bateson's filmic anthropology can best be described as an experiment in leaving the principle of the recording to chance as much as possible: "(...) it is so hard to predict behavior, that it was scarcely possible to select particular postures or gestures for photographic recording. In general, we found that any attempt to select for special details was fatal, and that the best results were obtained when the photography was most rapid and almost random."¹⁸

It is not difficult to discover the epistemological hunting from the written ethnography in this method. With the "random" photography, Bateson attempted to disable the written, literal order of anthropology and, even more, circumvent the directed and judgmental interests of one's own anthropologist gaze. The Anglo-Saxon heritage that Bateson brought to the cybernetic-constituted anthropological method was the abandonment of every type of teleology. He later explained this experimental phase of filming to a student: " ... one of the essentials (...) for understanding it, was to have been brought up in the age when (...) purpose was a total mystery."¹⁹ To approach the randomness as a principle of imaging corresponded completely with the paradox intention of recording the Balinese in their own spaces and temporalities without any intentions and without a psychological or ethnological objective. The anthropologist man with the camera had set his sights on the complex, candid reality of human interaction: " we tried to shoot what happened normally and spontaneously, rather than to decide on the norms and then get the Balinese to go through these behaviors in suitable lighting."²⁰

The idea was to record what was not predictable and that for which there were no concepts – everything that was not caught in the nets of symbolic terms because it evaded the order of the writing anthropologists. The idea was for this to expand the field of anthropology in

¹⁶ Gregory Bateson and Margaret Mead, *Balinese Character: A Photographic Analysis*. Special Publications of the New York Academy of Sciences Vol. 2, New York, NY, 1942. pg. 50.

¹⁷ Gregory Bateson and Margaret Mead, *Balinese Character*, op. cit., pg. 50.

¹⁸ Gregory Bateson and Margaret Mead, *Balinese Character*, op. cit. pg. 50.

¹⁹ Gregory Bateson, Margaret Mead, Steward Brand: "“For God's Sake, Margaret!”“ in: *CoEvolutionary*

Quarterly, June 1976, N. 10, pg. 32-44. Pg. 34

²⁰ Gregory Bateson and Margaret Mead, *Balinese Character*, op. cit. pg. 49.

the media and restructure it. With regard to film, it was finally possible to record human behavior beyond classifiable "postures and gestures," in all of its physical reality and the uniqueness of random correspondences, in all of the peculiar movements, speeds, and irregularities, in all of the indescribable surfaces of the body and the unpredictable effects of exotic light conditions that once again transformed the movements of the dancers.

While Gregory Bateson devoted himself to the intentionlessness of his recordings, he lost sight of the other side of the randomness coin: the inauguration of order that is required before each coincidence as a moment of convening: Only where there are paths can there also be crossings and hubs at which accidents, coincidences, and ideas occur.²¹ Bateson wanted to join the side of the disorder and pit *random* against *accident*, *hazard* against *chance*, and uncertainties against coincidence or probability. But the gamble of the cybernetic anthropologist did not so easily meet with success. Although God does not play dice, he has made the outline of the die into his symbol of victory. Bateson even attempted to lose the consciousness for what he was doing and show that not only the photographer but also the researcher could forget what was happening: "The photographer himself ceased to be camera conscious."²² However, all of the forgetting and making oneself forgotten did not change the fact that the photography and the filming brought irrevocable symbolic conventions into the field of the Balinese and even into the Balinese culture. What Bateson ignored was that photography and film with its mechanical devices, optical dispositives, and chemical processes were just as historically determined – in addition to the imaging techniques that were foreign to the Balinese – as the typewriter before them. Bateson had ignored that he, together with Heiner Müller, had always shot from the hip.

The film material remained uncut at first. Instead, Bateson began to system-theoretically organize all of the open questions regarding social and cultural patterns in lectures at the New School for Social Research. Within this context, he developed — halfway between the written word and the image — a graphic solution for the anthropological imaging problem. In the sense of schismogenic analysis, the typical Balinese behavior consisted of systematically abandoning the "perhaps fundamental human tendency toward cumulative personal interaction"²³ and continuing it over the long run without any escalation.

²¹ Jacques Lacan, "Where Is the Speaking, Where Is the Language?" in: idem.: *The Ego in the Theory of Freud and in the Technique of Psychoanalysis. The Seminar Book II* Weinheim, Berlin, 1991, pg. 351-372. "What do we want to say when we say that something occurs *randomly*? We want to say two things that can be quite different — that there is either no intention, or that there is a law." pg. 374.

²² Gregory Bateson and Margaret Mead, *Balinese Character*, op. cit. pg. 49.

This was manifested in his grid of an ordinate with the "cumulative action" on the abscissa of time in the form of a plateau. This plateau is what later came of age with regard to the history of philosophy in the work of Deleuze and Guattari. According to them, Bateson had created the most important vanishing lines from the limitations of Western thinking with these: "*A type of even intensity plateau has replaced the climax, whether in war or during orgasm. It is a regrettable peculiarity of Western thought to relate expressions of emotions and actions to external or transcendent goals instead of assessing them on an immanence level according to their own value.*"²⁴

It was no coincidence that a filmmaker, Maya Deren, was the one who pointed out to Gregory Bateson that the form and course of his plateaus was due solely to the structure of his imaging system – his Cartesian cross. Balinese emotions only appear in his scheme as a discontinuance of a rising, cumulative line because he systematically did not record a duration (endurance) in time as an increase in intensity. This could also be seen in a different light. Deren pointed out an obvious counter-example to Bateson: "The duration in time (...) applied to sexual activity even in occidental cultures is not considered a negation but, on the contrary, valued as a considerable achievement."²⁵ Accordingly, Bateson's graphic contained more information about Bateson than about Bali as soon as the graphic is no longer read in its pictorial value but according to the relationships that have produced it.

Maya Deren's uneasiness about the cultural theory was justified. What Gregory Bateson sought in the film images as behavior was not simply reactions in time, figures in space, and forms of typical movement patterns but socially pre-evaluated behavior that could only be grasped according to interpretation patterns such as dominance and submission. In a letter dated December 12, 1946, in which Bateson predicted to Maya Deren that she would have difficulties with her own film project, he explained to her the problems with his theory of binary and complementary elements with which he designated the relations of societal and family relationships or national characters as guidance or control systems and warned:

"The trouble is that these paired adjectives are very inadequate descriptions of human relationships, that in fact, to make a pair, the dominance and the submission have to be of such special sorts that the submission is the sort of submission which is appropriate to that particular sort of dominance. (...) Dominance may be linked with spectatorship, and

²³ Gregory Bateson, "Bali: The Value System of a Steady State." In: idem.: *Ecology of the Mind*, op.cit, pg. 163.

²⁴ Gilles Deleuze and Félix Guattari, *Capitalism and Schizophrenia. Thousand Plateaus*. Berlin 1992, pg. 37.

²⁵ Maya Deren, *Typoscript, Typed Notebook 1947*, from the Maya Deren estate. Mugar Library, Boston University. (unpublished).

submission may be linked with exhibitionism, or the pair of polarities may be reversed – dominance being linked with exhibitionism, etc. The important thing is that there shall be an ethological system of some sort underlying the relationship between the two contrasting elements. Beyond this it is probably necessary for the two elements to be talking about the same thing – e.g. sex, or drawing a hopscotch line, or whatever."²⁶

Maya Deren mistrusts the binary-constructed relationships categories with which Bateson allows behavior to become calculable as information in social feedback cycles. Her rebuke can be summarized as an indication of precisely the error that Bateson considers to be the most frequent in system-theoretical argumentations: The confusion of the "territory and the map." Deren's sharp camera eye ascertains that Bateson has been involved with the conventionalized imaging functions in his material from the very beginning, whether this is in the observations recorded in writing, what he has photographed, or what he has filmed. She considered the constructions of his ethnological definitions to be "orders" in the double sense of order and command, and she criticizes the mixing of the imaging levels. On February 22, she wrote the following note after a lecture by Bateson: "Last night the Bateson theory lecture and the mix up about Balinese 'startle.'²⁷ I suspect it doesn't sit in there right, because it is a 'symptom' of something which is an order, and it is not itself an order in the sense that the 'other feedbacks' are orders. Anyway, that dominance-submission business feels very wrong somehow but I don't dare speak as strongly as I should like to because I'd not have the right thing to offer instead. At least if he would use arrows of dynamic movement (what the hell is the name of them?) rather than make those directional signposts! Time Time Time — not Space. Energy — not Matter."²⁸

Deren's criticism of Bateson strikes the core of all communications theory: The functional differentiation (in the depiction) and operational equation (as coupling) of "order" as systematic order and a command: While Bateson pursues the self-introduced pairs of "dominance and submission" as components of a "Balinese Ethos" in his depiction, Deren insists that a movement in time would have to be observed hereby in which the "orders" develop as interaction and reveal themselves in their interferences, differentiations, and feedback as variables. while Bateson – as was the implicit rule of digital research –

²⁶ Maya Deren and Gregory Bateson, *An Exchange of Letters*, in: *OCTOBER* No. 14, MIT Press Cambridge, MA. Fall 1980, pg. 16-19.

²⁷ One strategy of fright is a type of Balinese distancing effect in which the mothers use frustrations to break their children's habit of extreme emotional escalations as a desire for climaxes in human interact by nursing someone else's child and "artificially" making their own jealous until it is tired of the jealousy, for example. Cf. Margaret Mead, *Blackberries in Winter*, Hamburg 1978, pg. 196. Consequently, the fright would also actually no be an order but a symptom of the upbringing.

²⁸ Maya Deren, Notebook 1947, handwritten notebook on the film about rituals from the Maya Deren estate. Mugar Library, Boston University. February 22, 1947.

introduced the binary into the social field so that algorithms would be recognized as a pattern in anthropology, he ignored that the film itself introduces an order: Movements are chopped into discrete units and can be compiled into movement illusions in this formalization and animated into illusionary movements. In scientific terms, the cinematographic order stipulates that the reactions and types of behavior can only be captured with time and that they change with time and temporality. In his filmic illustrations of the Balinese character, Bateson did not observe the time factor and therefore documented his indifference to the technical process of the storage medium. However, his films became the objects of not just simply "involuntary"²⁹ or even coincidental but simply economically based time-axis manipulation. As a result, they are a good example for the colonial perspective, which can remain notoriously innocent because he has implemented its operations and distortions of the optics; or, in more precise terms: into the optical equipment. The practical relativization of time is among the elemental operations of all film artists and researchers when they carry out experiential experiments on the screen. The time structure is the moment of the filmic that creates an imaginary effect through the conversion of the discrete individual pictures into movement perception in every presentation that cannot consciously envision its origin in the technical realization. Filmic perception is basically illusionary, and technical manipulations are not seen as such. Instead, they are present only in their esthetic effect. Slow motion or rapid motion take on certain emotional values as an expression of a movement correlation and are not simply the decelerated or accelerated variation. Rudolf Arnheim confirmed this in the terminology of an experimental psychologist as he researched at the Frankfurt School of Design: "Simply changing the speed simultaneously creates a fundamental change of expression."³⁰ This is why we attribute the charm of the movements at 18 pictures per second, which Chaplin also retained in his sound films, to the little man with the cane and derby and not the film apparatus that produced it. This is why the female Ninja and Wu-Tang fighters seem so extremely concentrated when their movements are transformed into slow motion on the screen before the deciding blow. Maya Deren had also made a film about the movements of shadow boxing in Wu-Tang and Shao-Lin: *MEDITATION ON VIOLENCE*. The film shifts the camera and body movements against each other and is therefore simultaneously a study on the cinema and the philosophy of Wu-Tang, which is derived from *The Book of Changes* and considers life to be a permanent metamorphosis.

²⁹Cf. Friedrich Kittler, "Real Time Analysis, Time Axis Manipulation," in: idem, *Dracula's Legacy. Technical Writings*. Leipzig 1993, pg. 182-206. Pg. 190

³⁰Rudolf Arnheim, "Film Theory," in: idem, *Critiques and Essays on Film*. Helmut H. Diederichs (Ed.) Frankfurt/Main 1979, pg. 17-164. Pg. 41

Because filmic perception is illusionary, we also sense a rapid-motion recording of Balinese dances as nervousness or a hectic feeling in the movement of the dancers and not as the economical or stingy behavior of the camera man. We understand slow motion, which also appears in the Balinese films of Bateson and Mead, as an expression of intensity in the trance – an enhanced control of the body and not evidence of an increased analytical interest that led to this recording and edited into the film without any consideration of its ritual integrity. However, what was intended to be an instrumental treatment in the name of research develops a peculiar effect despite Mead's off-camera commentary.

When it is edited well, the length of a jump that is artificially extended during the cutting and can be composed of various sequences and perspectives may possibly develop a tremendous escalation in excitement and tension instead of a neutralizing effect. In this way, temporality is transformed into intensity and ultimately into emotion in film. Since Dsiga Vertov's ecstatic movement analyses and syntheses in *MAN WITH THE CAMERA*, and at latest since Panofsky also had directed attention in America to the idea that "the specific possibilities of the film (...) can be defined as a dynamization of space and accordingly as spatialization of time,"³¹ it could have been clear that every relativization of the time conventions in film are a decisive transformation of everything that an ethnologist can record as cultural information. It is the transformatory set of tools with which the filmmakers can produce emotions in the cinema space quite independently of the emotional state of their actors and their method acting. But there is also no other way for the anthropologists to film in the field. Yet, Margaret Mead will be remember through her lifetime for this literal filmic illusion of a pure visual anthropology: "If a tape recorder, camera or video is set up and left in the same place, large batches of material can be collected without the intervention of the film-maker or ethnographer and without the continuous self-consciousness of those who are being observed."³² In a misunderstanding of all conditions and imprinting of tradition by cultural memory techniques, she quickly threatens those who resist such a filming of their behavior with an irrevocable loss of history and culture: "... the isolated group or emerging new nation that forbids filmmaking for fear of disapproved emphases will lose far more than it gains. (...) they will rob of their rightful heritage their descendants, who (...) may wish to claim once more the rhythms and handicrafts of their own people."³³ Filmic archives or institutions in which youthful and now urbanized and electrified indigenous people once again acquire their ritual

³¹ Erwin Panofsky, "Style and Medium in Film" (1947) in: idem., *The Ideological Predecessor of the Rolls Royce Radiator & Style and Medium in Film*. Frankfurt/Main, 1993. pg. 22.

³² Margaret Mead, "Visual Anthropology in a Discipline of Words" (1974), in: Paul Hockings (Ed.) *Principles of Visual Anthropology*. Berlin, New York, 1995. Pg. 4-10. Pg. 9.

³³ Margaret Mead, "Visual Anthropology in a Discipline of Words" (1974), op. cit, pg. 7.

and artisan heritage with the help of the anthropologist cinema have not asserted themselves. On the other hand, the subcultural use of electronic instruments in various musical styles such as the Delta blues, certain jazz, the rock music of Hendrix, or Techno suggest a physical transmission of the ritual techniques. In particular, they become tenable because they are aware of the media transformation of the cultural in the experimental composition in both the ritual and in the pop concert. However, every type of order remains unconscious and becomes trance formation at the moment of transference. However, Margaret Mead's well-intended imperialism that ignores technology was not avenged by the heirs of the dead Indians but by the projecting institution itself: To the degree in which, for example, the anthropology professor Karl Heider respectively changed the speed of the 16mm projector at the front of his auditorium at Brown University in order to bring the normal time of the cinema into the Balinese recordings by Bateson – “proper speed“ — Margaret Mead's commentary voice fell into the feminine and the masculine, allowing a fundamental anthropological difference of gender to become transparent in the cinema perception.³⁴ Parallel to the ongoing confrontation with Gregory Bateson, Maya Deren wrote an article about editing called "Creative Cutting" in which she gets wise to the anthropologist's film techniques: “It is the phenomenon of duration as tension which explains why slow motion – which may have in it very little activity – often makes for greater tension than normal or rapid motion for the tension consists in our desire to have our anticipation satisfied.”³⁵ It is this transformation of “duration“ into “tension“ that produces the filmic emotionality. The intensity – which appears in film as a certain editing sequence or as a non-schismogenic interaction and continuous sustained curve in the anthropological illustration – is produced from elements that were previously made to be discrete. If the cutting technique stays within accustomed conventions, it remains unnoticed as a function of the illustration technique and the transformation continues to be unconscious as a result. But if it appears – as in the beginnings of film art when there were hardly any conventions yet or later in the edits of Cinéma Vérité, in Jean Rouch, in Jean-Luc Godard's "false," visible cuts, and other avant-gardist disruptive esthetics – it disturbs the visual field and triggers irritation with the culture, its recording techniques, and thereby the conditions of subjectivity and culturization.

The relationship to the apparatus is intended to first be forgotten during the filming in the field and a second time in the cinema room. When the technical feedback of the film movement and the viewers' gaze disappears at the electrical device of the projection

³⁴Cf., Karl G. Heider (1976) *Ethnographic Film*, University of Texas Press, 1976, pg. 30.

³⁵Maya Deren (1947 CC) "Creative Cutting" in: *Movie Maker*, May 1947, pg. 190-206 and *Movie Maker*, June 1947, pg. 242 and 260, pg. 191.

apparatus, the transformation does not return as the effect of the filming production and intervention of an observer but as an imaginary being of what has been shown. This provokes the emotional reaction by the viewer. What Bateson experiences as a methodical failure of his ethno-cinematography due to his inability to edit the pictures in any systematically scientific sense returns as an emotional effect in a very different place: Maya Deren, who Mead and Bateson had originally allowed to use the Bali film material for her own *A Fugue of Cultures* film project, had new and ecstatic experiences with her own hand-operated viewing device: "The minute I began to put the Balinese film through the viewer, the fever began. It is a feeling one cannot remember from before, but can only have in an immediate sense. (...)"³⁶ Deren's ecstasy while viewing the recording can be described as a trance-formation in which a recurrence of the "concept of culture, personality, and character formation" in the sense Walter Benjamin's cinematographic unconscious that Bateson sought is not simply depicted but primarily produced. In the projection of the material, emotional ramifications develop that even form emotional relations in the long run. However, Deren recorded that especially the manipulation of the film's running speed constitutes a reason for the artificial ecstasy that has little to do with the Balinese trance technique but is primarily due to the feedback connection between the New Yorker's female body and the New York film device: "The immediate physical contact with the film, the nearness of the image, the automatic muscular control of its speed – the fact that as I wound – my impulses and reactions towards the film translated themselves into muscular impulses and so to the film directly with no machine buttons, switches, etc. – between me and the film (...). Later of course, I shall use the projector to get proper speed, etc. But first this intimate copulation between me and the film must take place ..." ³⁷

While Bateson had given up the hope that film could be a possible medium for illustrating the unknown, invisible circular-causal, and feedback mechanisms in social systems, he had just created all of the conditions for setting such mechanisms in motion. The filmic feedback, which the anthropologists had searched for in vain in the field, occurred in the cinema. Only in the projection were Margaret Mead and Gregory Bateson able to and forced to confront their cinematographically constructed Balinese self and comprehend the transformation of the foreign as their own metamorphosis and trance. Heider's students were thrown back on themselves by this same transformation, an endless and medial extension in the sense of McLuhan. With Deleuze, this can be described as a baker transformation as they are folded and flattened and simultaneously worked into a diverse *mille feuille*: This is the processing

³⁶ Maya Deren (1947 Notebook) handwritten notebook on the film about rituals from the Maya Deren estate. Mugar Library, Boston University 2/16/1947

³⁷ Maya Deren (1947 Notebook), op. cit, 2/16/1947

of one's own sensuality, the trance of which was induced not by the Indonesian drumming and dances, but by the little Trojan Horse of a 16mm projector in the lecture hall. Heider's valiant manipulating of the running speed always prevented this processing from becoming the customary procession of institutional anthropology.

In the model of their thousand-layer plateau, Deleuze and Guattari assembled the dual sense of the anthropologist order into a philosophical movement. With regard to the subject, they proved themselves to be film philosophers: "Starting from the forms one has, the subject one is, the organs one has, or the functions one fulfills, becoming is to extract particles between which one establishes the relations of movement and rest, speed and slowness that are closest to what one is becoming, and through which one becomes. This is the sense in which becoming is the process of desire."³⁸ Deleuze and Guattari selected the duration from Bateson's plateau – differing from Bateson himself – and recognized the perception of relationship intensities within it. In any case, the history of evaluating the Balinese ethos shows that the Bateson plateau is due to the filmic illustration experiments and in no case to the Balinese culture.

At latest in 1951, Gregory Bateson had integrated Maya Deren's objection that he was translating foreign systems and cultures into his own order through the notation system into a communications theory. This theory was published as a study on psychiatric reform. Together with a researcher group, Bateson had placed psychiatry under completely new auspices by simultaneously examining psychological disorders under the aspects of neurophysiology, linguistics, and behavioral psychology as failed or ambivalent communication. His gaze was now directed precisely toward the illustration system: The book about the new method bears the title of *Matrix*. He had taken Deren's criticism regarding how he had transferred Western forms of subject formation to the rest of the world. In the 1960s, Bateson then compiled all of his considerations on cybernetics and the cinema into an emancipatory theory of the subjectivity, according to which the personalities and characters are developed, broken, and also healed over time within the context of collective behavior forms. In his preface to a new edition 16 years later, he made the casual remark that: "At the time that this book was written, it was completely clear that the age of the individual belongs to the past."³⁹

³⁸ Gilles Deleuze and Félix Guattari, *Capitalism and Schizophrenia. Thousand Plateaus*. Berlin 1992, pg. 371.

³⁹ Jürgen Ruesch and Gregory Bateson (1995) *Communication. The Social Matrix of Psychiatry*. Heidelberg, pg. 11.

Bateson placed Norbert Wiener's thesis that the concepts of "information" and "negative entropy" are synonymous at the beginning of this new research. In a simple and elegant manner, he developed the correlation between the knowledge (or ignorance) of an observer about the state of a system on the one hand and the order or entropy that he or she can attribute or add to this system on the other hand: Each speaker is entangled with his or her "information and value system" in the continuous process of coding, evaluation, and transformation. The premises of the book – in which Maya Deren is just barely and fragmentarily perceptible like an echo of Narcissus – are firstly that codification and evaluation are two sides of the same operation, as Deren had already commented on the occasion of the coordinates system for the Balinese Plateau; secondly, that the simultaneous determination and evaluation that people make can be concluded from their behavior. The precondition for the latter is that the observers constantly revise their assumptions, consequently learning from their errors. Bateson's clear thesis on metacommunication reads like a commentary on the preceding indiscretions. It says that Bali is a mesh of gazes, recorded in the discrete pictures of the camera and projected before an audience that acts in response to these images....

As a theoretician and the greatest practitioner of a "learning to learn," which can mean both "learning to master a given context of adaptive action" and "change of character through experience"⁴⁰, Gregory Bateson integrated the lesson of the doubled film time into his communications theory. Starting with the psychiatric studies, he placed a social matrix at the basis of all human understanding, relativized the observer standpoint, and recognized every codification and illustration mode as an evaluation.⁴¹ Bateson had experienced the cinema as a case of dynamic relationships. His film experiment had replaced not just the sad typecasting of the anthropologist in the field who is just as helpless in terms of speaking as he is a powerful writer. He also did not simply make visible the structure of social feedback mechanisms among foreigners but also demonstrated that filming implies a fundamental relativization of behavior. Ethnographers must also know that they are at best cybernetic catalysts in their works. Norbert Wiener formulated this with a more malicious undertone to the Macy colleagues: "By all due respect to the intelligence, skillfulness, and integrity of intentions on the part of my friends from anthropology, I cannot imagine that any community that you have studied will ever be the same again. (...) There are many things in the social habits of a people that are spoiled and destroyed just by asking questions about them.

⁴⁰ Bateson, Gregory and Mary Catherine Bateson. *Angels Fear. Towards an Epistemology of the Sacred*. Frankfurt/Main, 1993. pg. 28.

⁴¹Jürgen Ruesch and Gregory Bateson (1995) *Communication. The Social Matrix of Psychiatry*. Op. cit, pg. 221.

This is in a different sense than they usually talk about it, *traduttore traditore*⁴² Bateson becomes a *trasformatore*. He ultimately makes a simple demand: art.

Years later – and much to the annoyance of Margaret Mead – Bateson expressed the following in remembering the shifts of the time axis in the Balinese film work: " ... I think the photographic record should be an art form."⁴³ On the other hand, Mead – who later edited the Bali material after all – remained faithful to her time as an anthropologist and subsumed the Balinese recording at all speeds, unaffected by her off-screen commentary, to 24 pictures per second of optical sound. She also did not miss the opportunity to allow the long thin figure of Gregory Bateson himself with the camera in front of his eye to appear at the end of the film *Trance and Dance in Bali* as if she wanted to present the erratic and flickering filmic moments as the mimesis into the obsessive and as a causal-circular exuberance. Even in 1976 during a conversation with Steward Brand, the two – who had both turned seventy some time before – could still reactivate their old controversy about "behavior" with just a cue. Mead immediately aimed at the weak blind spot of the cameraman, the stability:

"Mead (...) he's a good filmmaker, and Balinese can pose nicely, but his effort was to hold the camera steady enough long enough to get a sequence of behavior.

Bateson: To find out what's happening.

Mead: When you're jumping around taking pictures ...

Bateson: Nobody's talking about that, Margaret, for God's sake.

Mead: Well.

Bateson: I'm talking about having control of a camera. You're talking about putting a dead camera on top of a bloody tripod. It sees nothing."⁴⁴

Whether cameras can see, whether the control or the regulation of the view in the detail can be in the apparatus or even concealed, whether human and machine can develop symbiotic or parasitic relationships in the matrix of cybernetic artificiality – these were questions not just for filming anthropologists in the 1940s. Camera and radar eyes on airplanes and machineguns could not only record and translated visual material in the Second World War but also calculate trajectories and guide projectiles. But while the devices learned to behave more precisely, human behavior under the conditions of war had proved to be extremely

⁴²Wiener, Norbert (1963). *Cybernetics. Or Control and Communication in the Animal and Machine*. Dusseldorf and Vienna, pg. 201.

⁴³Gregory Bateson, Margaret Mead, Steward Brand: "For God's Sake, Margaret!" in: *CoEvolutionary Quarterly*, June 1976, N. 10, pg. 32-44. Pg. 37.

⁴⁴Gregory Bateson, Margaret Mead, Steward Brand: „For God's Sake, Margaret!“ in: *CoEvolutionary Quarterly*, June 1976, N. 10, pg. 32-44. Pg. 38.

unreliable and uncontrollable. People who were simply expected to shoot could suddenly no longer trust their senses and nerves, their muscles, or their self-assurance. They became entangled in intractable senso-motoric convolutions and began to tremble, stutter, stagger, and – at best – simply collapse. The mathematician Norbert Wiener, who was familiar with all of these states, searched for a remedy against this panicking in the service of the US Air Force and found a new principle of integrated control: "This method of control appeared to us not unlike a method already known in electric circuits and now being applied in servomechanisms, or systems by which we switch in an outside source of power for control purposes (...) We call this negative feedback."⁴⁵

It was this mechanism of negative feedback that Bateson sought when he desired to achieve control over the camera, which would see in his place so that he could finally target the goal of his vision — a constant feedback between technology and sight, which rather precisely describes the difficulty in achieving balance between self-mastery and abandoning self-control, which is necessary in every artistic production. Bateson was increasingly interested in his own cultural transformation, which obviously included his surrounding world as an ecosystem. In the meantime, the ethnologists were able to further deconstruct the picture of the foreigners. If necessary, they would be do in a brutal and liberating way like Karl Heider, who showed his students that sometimes just a valiant grip into the apparatus allows the spirit to appear in the anthropological canteen.

Bateson writes about the wisdom of the gods, which appears at the end of this life-long research report that meanders through the sciences in a letter dated December 20, 1967 to the neurophysiologist Warren McCulloch, who is one of the pioneers in the mathematical calculation of neuronal network processes and was one of the founders of the Macy Conferences: "I suggest that one of the things that man has done through the ages to correct for his short-sighted purposiveness is to imagine personified entities with various sorts of supernatural power, i.e., *gods*. These entities, being fictitious persons, are more or less endowed with cybernetic and circuit characteristics."⁴⁶ Gods regulate and rescue the equilibrium of the world by maintaining the homeostatic processes beyond all of the individual human interests. Maya Deren had also regretted that no humane society has integrated this divine self-regulating dynamic in its social system: "But there is no society or organization designed to change itself and this is what the whole hitch is,"⁴⁷ was what she

⁴⁵Norbert Wiener, *I Am a Mathematician. The Later Life of a Prodigy*. MIT Press. Cambridge, MA and London, 1956. pg. 252

⁴⁶Bateson (1982) pg. 67 in: *CoEvolutionary Quarterly*, Winter 1982, pp. 62-67.

had noted on March 16, 1947. However, shortly thereafter she encountered the gods in Haiti who appeared on the scene in the sense of such transformations, who seized the body and intervened in human relationships. In this case, it becomes clear to what extent such good gods form an alliance with storage and transmission media.

⁴⁷ Maya Deren, *Typoscript, Typewritten Notebook 1947*, from the Maya Deren estate. Mugar Library, Boston University. (unpublished) on March 16, 1947.^{vii}

1. cf. Bateson, Mead and Brand: 1976.

2. Years later, Margaret Mead described the process in an interview: "From a complex culture like Bali you take a lot of chunks — birthday ceremonies and funeral ceremonies, children's games and a whole series of things, and then you analyze them for the patterns that are there." (Bateson, Mead and Brand: 1976: 37).

3. cf. Neiman 1988: 12.

4. On intrinsic value in recursive or cybernetic systems cf. Heinz von Foerster 1993a: 103-133.

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