



FEMINIST MEDIA THEORY: ITERATIONS OF SOCIAL DIFFERENCE

Schizophrenic Techniques: Cybernetics, the Human Sciences, and the Double Bind

by Orit Halpern

In 1969 in a symposium on schizophrenia and the double bind at the National Institute of Mental Health, the cybernetician and ethnographer Gregory Bateson stood before an audience of some of the most prominent psychiatrists and psychologists in the world and proceeded to discuss the mental life of animals. This was not a question of expertise; Bateson was known as the inventor of the term "double bind" and a pioneer in creating models to treat addiction and wartime trauma, but he did not wish to discuss those cases. Rather, he invoked, by example, a porpoise.^[1]

This porpoise had been trained at a Navy research facility to perform tricks and other trained acts in return for fish. One day, her trainers started a new regimen. They deprived her of food unless she produced a new trick. Starved if she repeated the same act, but also if she did not perform, the porpoise was trapped. This experiment was repeated with numerous porpoises, usually culminating in extreme aggression, and a descent into what from an anthropomorphic perspective might be labeled disaffection, confusion, antisocial, and violent behavior. Bateson with his usual lack of reservation was ready to label these dolphins as suffering the paranoid form of schizophrenia. The anthropologist was at pains to remind his audience that, however, before rushing to conclusions about genetic predeterminacy or innate typologies, the good doctors should recall that these psychotic porpoises were acting very reasonably and rationally. In fact, they were doing exactly what their training as animals in a navy laboratory would lead them to do. Their problem was that they had two conflicting signals. They had been taught to obey and be rewarded. But now obedience bought punishment and so did disobedience. The poor animals, having no perspective on their situation as laboratory experiments were naturally breaking apart—fissuring their personalities (and Bateson thought they had them) in efforts to be both rebellious and compliant, but above all to act as they had been taught. The motto of the story being that to act rationally in a set pattern following given rules might also be to act psychotically.

This one porpoise, however, appeared to possess a good memory. She was capable of other things. Bateson related how, between the fourteenth and fifteenth demonstration, the porpoise "appeared much excited," and for her final performance she gave an "elaborate" display, including multiple pieces of behavior of which four were "entirely new—never before observed in this species of animal." These were not solely genetically endowed abilities; they were learned, the result of an experiment in time. This process in which the subject—whether a patient or a dolphin—uses the memories of other interactions and other situations to transform his or her actions within the immediate scenario can become the very seat of innovation. The dolphin's ego (in so far as we decide she has one) was sufficiently weakened to be reformed, developing new attachments to objects in its environment and to memories in its past. This rewired network of relations can lead to emergence through the recontextualization of the situation within which the confused and conflicted animal finds itself.

This story [of the porpoise and its trainer] illustrates, I believe, two aspects of the genesis of a transcontextual syndrome:

First, that *severe pain and maladjustment* can be induced by putting a mammal in the wrong regarding its rules of making sense of an important *relationship* with another mammal.

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experience may promote *creativity*.^[2]

Schizophrenia, therefore, can be the very seat of creativity: a not unproblematic assumption. But one that nonetheless tied older histories of pathology, madness, and genius, to the new theories of communication, which for Bateson also included our minds.^[3]

Bateson's conclusion was that the pathological form of schizophrenia is an inability to comprehend the structure of the communicating situation. Schizophrenics receive signals, but cannot respond in a purposeful way (i.e., with a deferred known goal) because they have no other, different, communicative situations to compare, contrast, or use, outside of the immediate message. Paranoid symptoms therefore emerge from dysfunctions in storage and memory. If an intervening program cannot enter from memory, the repetitive actions cannot be disrupted. The system cannot learn and it becomes stuck or jammed. The irony is that the more rationally and logically a creature acts under particular conditions the more self-destructive it can become.

Bateson went so far as to suggest that schizophrenia is one of the standard states we all live in within contemporary information societies. Reconfiguring the idea of psychology into "an ecology of the mind," in his terms, Bateson focused on cognition as the result of environmental interactions and communication structures. From this model he extrapolated that it was quite common to be embedded within contradictory communication structures without a Cartesian or external perspective on the situation. Bateson coined the term "double bind" to define schizophrenia in order to articulate this understanding of pathology as a communicative disorder.^[4]

Counter to previous studies in psychoanalysis on schizophrenia, Bateson's research was no longer a matter of individual and isolated subjects. For Bateson, what was once a pathology of cycling cathexis within an individuated subject—psychosis—was now a matter of environmental interactions and the structure of the communication channel. The porpoise, its trainer, and the demonstration tank were all one system, and psychologists, ethnologists, and anthropologists now had a new object of study—the communicative exchanges between entities in a system. Scientists now focused their attention on the interactions between entities as the site of measure, manipulation, and study.

And Bateson was not merely amusing his audience. When situated within a lifetime of work that traversed the study of cultural conflict in Papua New Guinea, the schizophrenic nature of the Balinese character, the structure of Japanese propaganda, and the psychiatric health of veterans from the Korean and Second World Wars, Bateson's lecture gestures to a broader transformation of methodology in the social sciences. In his work, and that of many of his compatriots in the social, communication, cognitive, and computational sciences, we hear similar statements transforming a world of stable identity, conscious subjects, and discrete objects into one of interaction, patterns, and networks.

I open, therefore, with this seemingly irrelevant story of rational psychosis and intelligent animals because it illuminates this midcentury transformation in the constitution of truth and the definition of reason in the human sciences. I wish to take this turn away from discourses of structure whether of biology, psychology, or society to the terms of communication, cognition and ecology in order to examine the emergence of a new epistemology in the human and social sciences—an informatic optic—founded on a tense relationship between historical understandings of the anthropos, representation, and objectivity and emergent ideas of probability, information, and computability.

This story, in keeping perhaps with the psychotic logics from which it is constituted, is neither linear nor simple. The history of how porpoises gained rationality is a queer one that traces how colonial and modern scientific projects got folded into postwar communications and cybernetic theories in the interest of new methodologies in the human and social sciences. In the course of this piece I will track the vector between the ethnographic work conducted in the Highlands of Bali by Gregory Bateson and Margaret Mead to Bateson's role in the development of self-help and family therapeutic technologies. In keeping with the concerns of contemporary work in queer and race studies to examine the politics by which older categories of difference, sex, and nation are consumed into war machines, the "folding of queer and sexual national subjects into the bio-political management of life," as queer theorist Jasbir Puar puts it, a central task emerges of asking similar questions in light of digital media—particularly information technologies and economies.^[5]

Bateson's formulation of the double bind, sitting on his own work as an ethnographer in Papua New Guinea and Indonesia in the 1920s and 1930s, does indeed provide a stunning case study of the logistics by which disciplinary and colonial histories were folded into hyper-individuated and personalized technologies. What had been about encounter with different cultures and the description of difference within the anthropos became a tool for therapy and self-help. Inside these cybernetic minds and ecologies, within the rise of new cognitive and human sciences founded upon ideas of communication, what was once mystical and magical, psychological and conscious, colonial and different was reframed in terms of communication channels, redundancy, and performance. Arguably, Bateson's evolution from an ethnographer working in a modern and

colonial ethnographic climate to a postwar cybernetician is symptomatic of this broader shift in the social and human sciences from discourses of race, ethnicity, and territory to those of behavior, communication, and environment.

I call attention to this shift not merely to make an important point about epistemology after the war, but because this move between structure and personalization, from colonial contexts to therapeutic practice, confronts us like the schizophrenic leaps of the porpoise with the strangeness of the present. If there is, of late, so much talk about nomadism and war machines, about the inefficacy of older forms of politics; perhaps it is linked to these moves by which what was once animal, queer, or different has been assimilated into a form of politics—perhaps biopolitics—that is therapeutic, soothing, and hyper-individuated. But despite all these calls to attend to the folding of “queer” history into the present, there is almost never an analysis of the moves necessary to transform older questions of encounter, colonialism, and objectivity into contemporary forms of globalization and biopolitics. By what tactics do these foldings occur? How does genealogy make us recognize our contemporary condition? And awaken us to the strangeness of those forms we otherwise find natural, which, in fact, many of us may partake of? This form of torture (surely the porpoise suffered for science), now commencing in the name of “creativity,” poses lessons for our present. Perhaps, like the archival fragments Walter Benjamin once aspired to produce, it awakens us from our complacency to recognize the violence but also, perhaps, the creativity and emergence within our present. It is story that destabilizes any clear understanding of either cybernetics or militarization in the present.

This, then, is a history of both possibility and danger. Building these models mandated a repression and disavowal of the violence that spawned them, but also produced new possibilities for life. There is pain in the story of the porpoise, but there is also a possibility in the theory of double bind to activate an ecological, environmental form of mind. Reactionary return will, as the schizophrenic repetitions remind us, serve no positive purpose. Cybernetics is not a moral entity. But it does pose some ethical questions about how we wish to use these technologies—of communication and psyche. What, this essay asks, would change if we knew that addiction therapies were built on colonial ethnography or the torture of animals? This article is a preliminary experiment in reenacting this question. Bringing these pasts back into the picture is not to throw out group therapy, but perhaps to revise our understandings of its function and allow us to reimagine other possible forms of life. Most importantly, we may ask, do these reflexive reenactments still produce consciousness? For Bateson, the porpoise allowed a world of communicative networks and rational psychosis to be made visible as a site not of determinism, but of experiment. The successes, but also the failures, of control were made spectacular processes—visible to the horror and pleasure of social scientists. Can this still happen today? We seek the tactics by which to do so.

Histories of Ethnography

But to begin: Bateson's concerns with psychosis and schizophrenia dated to the late 1930s when he was sent to Bali, in a project funded by the American Museum of Natural History and the Committee for the Study of Dementia Praecox,^[6] to study rituals of trance and mysticism with the prominent anthropologist Margaret Mead. The academic purpose of the research, despite its focus on trance and mysticism, was not the comparative study of religion or belief, but rather the comparison of cultural psychologies. The hypothesis guiding the research was that trance states and the performance of possession and haunting demonstrated weak egos. These schizophrenic performances of the Balinese might, Mead and Bateson postulated, therefore teach something about the etiology of mental illness.^[7] Their research agenda was to unearth, in these Others, a better understanding of schizophrenia, a pathology that in their words, “continued to rise amongst us.” “Us” implicitly referred to the United States and Western Europe.^[8]

Highland Bali was not a site chosen for its specificity. It was an accident. Mead and Bateson would have preferred to return to one of their earlier field sites but as a result of political turmoil or economic costs could not. Lack of historical, social, or cultural knowledge about the location did not, however, deter the couple. From the start, their argument was that their study was about developing methods by which to study psychology and culture together, and was applicable to any scenario anywhere.^[9]

While many anthropologists, musicologists, and artists were fetishistically enamored with Balinese style, culture, and aesthetics, Mead and Bateson evinced no such desires. What prominent avant-garde composers also working in Bali at the same time, such as Colin McPhee and his ethnographer wife Jane Belo, found as a source of inspiration for reconfiguring perception and aesthetics was for Bateson and Mead, a substrate to substantiate the automation of recording culture.^[10]

Mead and Bateson therefore opted to focus on bodily gestures and performances. With an attitude symptomatic of communication theorists in general and of Bateson and Mead in particular, methodology trumped any direct investment in the specificities of the locale. This gestural focus supporting their methodological imperative to produce, as Mead would put it a few years later, a “global” social science.^[11]

Affirming their lack of interest in voice or translation, they never learned Balinese or any of the local dialects with any competence, and never bothered with Dutch, the academic and colonial language of the region, or Malay, the major trading language and creole lingua franca of the archipelago.^[12] This failure of language, however, induced a turn to pure inscription. Bateson took over 36,000 photographs and 45,000 feet of film,

accompanied by 7200 boxes of notes.^[13] The ethnographer produced a massive archive of gestures from which to generate his analysis.

Their concern with using visual media is evidence of their focus on producing globalized and generalizable methods over specific contextual details, and part of a dream of a universal language of vision that might replace the inadequacies of spoken and written language and scientific description.^[14]

Global Methodologies

The result was a work still considered pioneering in visual anthropology and psychological theory; a new method that was also a new form of literacy. Mead and Bateson reproduced this vast archive in a large book, *Balinese Character*, and in a series of television shows for CBS in the early 1950s. Mead and Bateson hoped to use these large texts and films as part of producing a new form of multimedia literacy: readers were to look for patterns, and make correlations between text and image, between gesture and mind. *Balinese Character* presents a text for training future anthropologists in a literacy of patterns and re-mediation, organized by gesture and movement, no longer based in written languages. Bateson and Mead had one purpose—the inundation of information that might make the patterns comprising culture visible. Culture could now be made visible through patterned redundancy, not linguistic description.

They made their emphasis on redundancy as a pedagogy quite clear in the introduction to the text: "In this monograph we are attempting a new method of stating the intangible relationships among different types of culturally standardized behavior, spatially and contextually separated." This statement might be read as a declaration of form, and its prime investment is not descriptive, but rather, to make an "intangible" but performative "relationship" somehow newly visible. By using photographs, they argued, "the wholeness of each piece of behavior can be preserved, while the special cross-referencing desired can be obtained by placing the series of photographs on the same page." This is part of a new method dedicated to "embody that abstraction which (after we have abstracted it) we technically call culture."^[15]

Refocusing the attention on ethnography, away from specifics and particularities, they make it clear that facts about a culture, or given taxonomies and ontologies of behaviors, will not be offered. Instead, "patterns" will be made visible. By deduction it is arguable that what Mead and Bateson most clearly want to make visible is not cultural difference, but methodology. They go so far as to render equivalent the concept of culture and the practice of method, by arguing that what is seen in this documentary is a pattern that "embodies an abstraction;" that abstraction—which is comprised of patterns and embodied—they label "culture." For Mead and Bateson, visualizing and studying culture are analogous. This is a world already fantasized as informationally dense and overly recorded, where language and representation are repressed for the fantasy of an infinite archive of performative actions that render any sense or cognitive process equivalent and visible. These studies demonstrate a compression of seeing, thinking, and acting directly evoked by the assumed legibility of bodily gestures.

Their image work implies a decentered body and subject serving directly to embody a program or sign whose significance emerges not through translation but through finding a repetitive iconography or pattern in the data, as can be seen below (Figure 1), where Mead and Bateson repetitively inundate the viewer with similar actions and gestures to make a point about the embodied nature of the Balinese subject and the autonomous force of non-conscious actions and body parts.

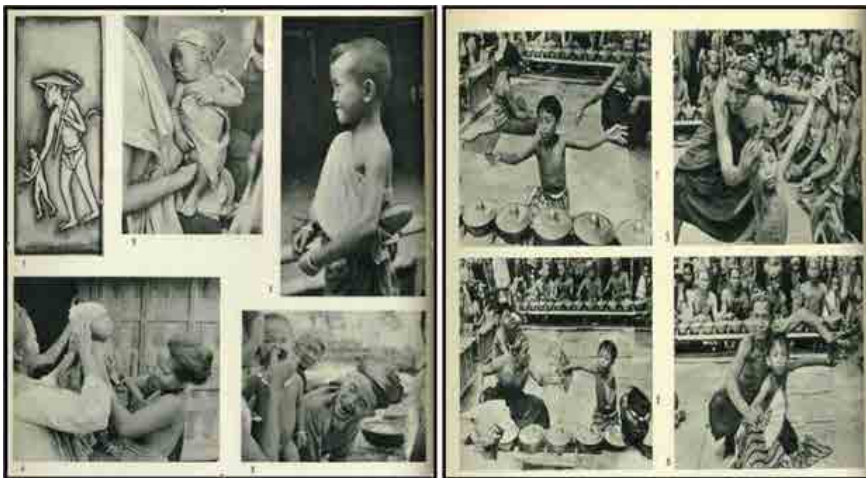


Figure 1: Bodies as Signs

"Teaching by muscular rote in which the pupil is made to perform the correct movements is most strikingly developed in the dancing lesson..."

This sequence of photographs illustrates two essential points in Balinese character formation. From his dancing

lesson, the pupil learns passivity, and he acquires a separate awareness in the different parts of the body (cf. PL.20, fig.4)"

—*Balinese Character*, pp.131-32 and pp.86-87

And to make these "patterns" and redundancies visible, Bateson argued that he made the camera an unconscious part of himself. He seemed to desire recording everything (as though all elements of culture were amenable to such capture). He sought to document un-edited gestures and performances, even relinquishing the tripod for a handheld camera, allowing him to move with the action, and anticipating the aesthetics of *cinéma vérité*. His obsession with these bodily gestures and movements emanated from a belief that the Balinese had neither conflicts nor egos. This strange social and individual psyche could be studied synchronously through these camera techniques.^[16]

Bateson also took thousands of photos. In these images, Bateson steadfastly sought to evoke moments of extreme movement and bodily dissolution. He deliberately repeated in multiple scenarios the same story of acts of touch, and physical excitation, without erotic climax (see Figure 2). These photographs are themselves frustrating. While the subjects return the gaze of the camera and seem to be performing for the ethnographer, Bateson's style is flat, almost boring. His work lacks an aestheticization of this interaction by way of strong formal qualities such as accenting the subject's features or emotions, or by integrating dramatic graphic elements of light and shadow, as in the dramatic realist styles of projects such as those of Dorothea Lang and Walker Evans documenting the impact of the Great Depression on Americans, for the Farm Security Administration, at almost the same period, establishing many of the conventions of documentary.

Perhaps more significantly, their work also separated itself from other universal visions of humanity emerging from the same context, such as those finally presented in Edward Steichen's *The Family of Man* exhibitions in the 1950s, but that were based on photography done through the 1930s and 1940s, deploying the aesthetics of the WPA. *Family of Man* was also dedicated to a global and universal pictorial language and operated on the assumption of a vast, infinitely available archive of human experience documented through the camera. But Steichen's aesthetics encouraged identifying with shared experiences between cultures. This identification is produced through a construction of narrative by way of matching images with texts that are not descriptive but rather complimentary, thus developing a literary and emotional diageitic. *Family of Man* does not assume a one-to-one correspondence between language and image and between what is said and what is shown, but rather assumes a relationship of interpretation and translation between the visual and the written media. The show also possesses a clear alignment of the gaze through strong graphic elements and explication of viewpoints and events. *Family of Man* is also temporally progressive. As a show, and later as a book, it was organized according to the imagined normative, heterosexual life cycle of the universal human being.^[17]

Mead and Bateson's work, on the other hand, lacks time. There is no culminating narrative or normative life cycle organizing the time of these images or films, there is not even a dramatic conclusion to the interactions filmed, nor is there any diegetic narrativization in the whole of the text. Independent moments describe concepts in the culture, but always in a manner that demands continuing to other segments of the text where the same concepts will be regularly repeated (Figures 1 and 2) Mead's description of Bateson's photographs is also obsessively informatic and literal. Most importantly, if Steichen's and others' projects for global visual languages attempt to formulate correlations and likenesses between cultures in terms of homogeneity, Mead and Bateson affirm the alterity of their study. As Mead states, the forms of love and hate are not dialectically different from our culture, merely "lacking." (Figure 2)



Figure 2: "Bizarre intensive stabilization"
 "STIMULATION AND FRUSTRATION"

We have already noted (Pl.38) that the child's responsiveness is played upon by the mother. In practice this means that the give-and-take of stimulus and response between mother and child *lacks* the sort of climax structure which is characteristic of love and hate in our own culture. The Balinese mother stimulates her child, but when he responds, she is unresponsive and never allows the flirtation to end in any sort of affectionate climax."

—From book *Balinese Character*, Plate 47 (1942) *emphasis mine*

It should also be noted that the concept of Plateau in Deleuze and Guarrari's *Thousand Plateaus* emerged from this Balinese work.

Bateson's images thus rarely facilitate a normative optic of identification, recognition, or objectification. The spectator is not offered a direct separation or affiliation, but only a "lack" in Mead's text. This non-identification can also be attributed to the distance and proximity of the image to its subjects. The camera is rarely near enough for the close-up or far enough to offer an establishing shot of the entire environment. This holds true in both the cinematic work and the photography. Since the camera is often moving with the action, or located at distances that remove the figure from the broader surroundings, the result is a perceptual disorientation and a collapse of epistemic control—interestingly enough, at the very site

of documentary realism.



Figure 3: Communication as Gesture

The body recorded as a medium, in Bateson's work, for the production of culture.
—Gregory Bateson and Margaret Mead, *Dance and Trance in Bali* (1952). Footage shot 1937-39.

This perspective is doubly amplified in Bateson's film footage because of the extremely long takes and the lack of editing at the time of fieldwork. Retroactively, in 1952 Mead decided to use these films for broadcast on CBS. At this juncture the rather extended takes and the non-event structure of the original films was largely overcome by integrating Mead's voiceover explaining the action and focusing on dramatic moments in the trance sessions, particularly moments when participants slip between states, suffer moments of tremor and seizure, or actually perform attacks and killings of ghosts, witches, and demons.

It is worth noting, however, that Mead and Bateson had separated at this point. After the war Bateson revisited this work and now found Mead's approach inappropriate. He was particularly against the voiceover integrated into the films, the voice of authority. He also never returned to intensively using visual, filmic, and photographic methods in his own work, although many working with him did so regularly.^[18]

Visualizing Psyches

These photographed and filmed states presumably demonstrated moments where psychology might speak through physiology. Just as hysterics of the late nineteenth century purportedly demonstrated their pathology by way of susceptibility to hypnotism and performative outbreaks without ever speaking, the anthropologists hoped that the Balinese dances would accomplish the same. And just as hysteria had been a platform for developing both photographic and psychotherapeutic techniques, this situation was also a site for methodological innovation.^[19]

Hysterics and psychotics, however, posed problems for scientific authority as well. In demonstrating the methods of analysis and medicine, the hysteric was complicit in producing the medical gaze, but also served as the site that threatened its authority by revealing the truth that the doctor, too, was part of the experiment. Mead and Bateson's work is, in this sense, a classically schizoid practice where there is a productive conflict between the form and the content. The form was scientific documentation, and the content was the psychotic photographic record. Mead was never comfortable with what she had discovered in Bali and attempted to reassert voiceovers and modern aesthetics of authority upon return to the work. Bateson also appeared to struggle. He openly confessed to finding the Balinese "boring" and perhaps unworthy as objects of study. He found their culture incapable of change, lethargic, and stuck in plateaus. In Bateson's words, "the whole population was markedly slow both in intellectual response and bodily movement" and he characterized the culture as possessing an appearance of "impenetrable dullness."^[20]

While initially disinterested in the Balinese, Bateson later commenced to embrace these performative methods and to abandon ideals of objectivity. This subjective and ecological—perhaps psychotic—perspective on knowledge came at the cost of his accreditation as a research scientist. However, what was not popular in the academy was popular elsewhere.

Transferring from Ethnographic Encounter to Therapeutic Techniques

While Bali may seem distant from concerns with computing and cybernetics, it was not.^[21] In a curious turn of history Bateson was to become the guru of an emergent west coast communal culture and an icon for many of the ideals of a new information society being birthed in the nascent Silicon Valley and elsewhere. Most prominently displayed in venues like the *Whole Earth Catalogue*, Bateson's ideas and concepts were part of a new techno-utopic culture based in communication theories, cybernetics, and environmentalism.^[22] From the counterculture to the architectural utopias of Buckminster Fuller, to political theorists at Harvard such as Karl Deutsch, Bateson's name—and his reconceptualization of mind, ecology, and schizophrenia—were regularly cited. What began as ethnography in a colonial situation turned into a philosophy for computing and a beacon for self-help and therapeutic culture.

Bateson's made the shift to discourses of communication, control, and cybernetics during the war when he, like most anthropologists, readily went to work for the Office of Strategic Services, serving 20 months in Ceylon, India, Burma, and China in the service of the Allied forces as an interpreter of local custom and culture (a fact he later critiqued about himself). While initially excited, he eventually found the work dull and

accomplished little.

With one exception: he briefly operated a radio station undermining Japanese propaganda in Burma and Thailand. Studying the content of broadcasts, Bateson decided to engage in acts of positive feedback. He recalled, "We listened to the enemy's nonsense and we professed to be a Japanese official station. Everyday we simply *exaggerated* what the enemy was telling the people."^[23] He recalled how his work in ethnography had made him recognize that psychology was a matter of interactivity, not an isolated aspect contained within individual subjects. Linking together his observations on the schizophrenic subject of the Balinese, the nature of propaganda and media, and the way cultures engage in conflict, Bateson came to reformulate mind in terms of communication and, in his words, "ecology." His future interest in cybernetics emerged out of these seemingly unrelated observations about culture, propaganda, and feedback. After the war, upon his return to the States, he went on to be one of the most active participants in the Macy Conferences on Circular Feedback and Mechanisms.^[24]

It is a testimony to the methodological rather than ontological focus of cyberneticians, and Bateson in particular, to witness how readily the ethnographer displaced any concern for taxonomy or content for a focus on transferable techniques that could be scaled to model anything from cultural conflict to personal psychic suffering in terms of communication.

Rethinking Psychology

In the early 1950s, inspired by these ideas of communication and cybernetics and disenchanted and frustrated by academic life after a brief stint at Harvard, where he was dismissed, Bateson went to Palo Alto to work as an ethnographer in the psychiatric unit at the veterans' hospital. His work with these patients was driven by an overwhelming sense of depression about his previous war work and the seeming inevitability of conflict and violence in human relations.

In the hospital, Bateson had the opportunity to merge his work with communication and cultural conflict with psychology and psychiatry. His job was to provide additional data to supplement the work of a team of psychiatrists. Working with patients coming from the Korean War and the Second World Wars, he recognized that many of the pathologies of addiction and battlefield trauma might have emerged from the result of conflicts in signals that emerged at the same time without hierarchy between sets. In this case, the signals were "Thou Shalt Not Kill" and "Thou Should Kill." His innovation was to recognize that the environment that patients were in might be part of their psychological system, and that if two contradictory messages arrive at the same time, this presents problems for the subject. Applying communication theories to minds, Bateson predicted that perfectly reasonable people might become dangerously psychotic if faced with incommensurable messages.^[25]

Inspired by the Macy Conferences, Bateson—with a methodological zeal that marked all his work—was steadfast in applying theories of mathematics, logic, and communication to his ethnographic observations. Witnessing the internal divides of patients he began to think about schizophrenia as a problem with typing, or finding "sets," as defined by Bertrand Russell, by which to hierarchize and organize information. Schizophrenia, according to Bateson, is the result of closed systems for which there are two self-negating terms. This dilemma is classically explained in the following terms: person must do X, X negates Y, person must also do Y, and therefore, neither can be executed. The person cannot ignore X or Y, but also cannot comment on the absurdity of the situation.^[26]

For example, a child is commanded to be "spontaneous" or "creative." To obey the command is to fail to be either. To disobey is to break a rule. Either way, the subject is caught unless they are able to suggest an external option out of a different framework, for example, retorting: "That is not possible," or "I don't understand the rules." These responses operate at a different logical level, with points of reference in a different communicative situation.

Bateson argued that schizophrenia is not an automatically pathological state. But it was a communication structure capable of being modeled, as in theories of communication, as a system and a channel between and within the body, different actors, and the environment. For Bateson this situation made the mind an "ecology."^[27]

If schizophrenia is a potentially dangerous condition, as the porpoise demonstrated, it is also a creative one. It is like "play," in Bateson's words, a potential space of experiment and testing of different forms. Schizophrenia, Bateson continued, can best be understood as "trouble in identifying and interpreting those signals which should tell the individual what sort of message a message is, i.e., trouble with the signals of the same logical type as the signal. This is play." Schizophrenia is productive. But, it takes pathological character when subjects do not recognize their situation as playful, and respond by literally turning the game into the world.^[28]

Bateson's conclusion was that the pathological form of schizophrenia is an inability to comprehend the structure of the communicating situation. Schizophrenics receive signals, but cannot respond in a purposeful way (i.e. with a deferred known goal) because they have no other, different communicative situations to

compare, contrast, or use, outside of the immediate message. Schizophrenia is a problem of failing to circulate information and accumulating too much in one place: too many signals interfering with each other.

Networking from Psychology to Society

Bateson relocated schizophrenia from a problem of physiology or individual subjectivity to one of communication, channels, and networks. To make clear his influence in cybernetics and communication theory, he clearly invoked concepts of systems. He argued that thinking about violence and failure in terms of homeostasis or disequilibrium might offer an alternative to an absolute and static category of normal or pathological by which to assess the dysfunctionality of a patient, a family group, or a society.

Bateson's concept of how systems become violent through a process of schizogenesis is illustrative of this turn from stability and pathology to channel and capacity. It also reveals how Bateson approached individual psychologies and social systems analogously. For Bateson, all systems—no matter what size or space—oscillate. However, if a system is stuck in a homeostatic repetition it may end up in disequilibrium because no new information can be entered to change the pattern of action-reaction. Cold War nuclear deterrence behavior was a classic formulation of this problem.

To consider why a system might become dangerous to itself, Bateson introduced two terms—still useful today in thinking about politics—symmetrical and asymmetrical schizogenesis, and two concepts, “regenerative” or “degenerative,” to describe circuits of action. He took the terms regenerative and degenerative from communications theory. His case studies for asymmetrical schizogenesis were taken from his fieldwork with the Iatmul in Papua New Guinea, and for symmetrical systems, from his work in the Balinese Highlands.

Asymmetrical schizogenesis leads to regenerative circuits or, in his language, “vicious” circuits. Bateson defines asymmetry and regeneration as a situation when A causes B causes C ... increases in N causes increase in A. It is a far more complex form of feedback invoking the logic of “and then ... and then ... and then,” but not in a linear or automatically causal way. This feedback loop without compensatory mechanisms or change leads to intensification and increasing rates of reaction, usually towards violence. Opposing this idea, Bateson also offered the concept of degenerative circuits and symmetry. Degeneration is not a pejorative in this case. Rather, symmetrical schizogenesis is defined as “self-correcting,” “increase in N causes a decrease in M ...,” and so forth.^[29]

It is a testimony to how far Bateson went to separate his work from any stable idea of normalcy or pathology that he clearly argued that neither system is preferable, despite the confusing terminology linked to regeneration and degeneration. The problem, he argued, was that neither symmetry nor asymmetry changed the nature of the interactions or allowed emergence and learning.

Lurking within a rather confusing formulation that merged concepts of redundancy and noise (linked to degeneration and regeneration in circuits) with ideas of communication is a basic issue of proximity and difference. But difference was now understood as a temporal separation from the moment of interaction. Bateson re-shifted a problem classically framed as one of dialectics and stability to instead focus on the system's capacities to negotiate stimuli. Homeostasis was not a virtue for Bateson, and as a result, he wanted to focus on increasing the capacity of a system—now understood as a network of different agents engaging one another—to take in more information and stimuli and to vary its behavior. Therapy was directed against repetition, in a manner analogous to psychoanalysis, but lacking the psychoanalytic effort to turn the free association of the dream into a set narrative.^[30]

If a half century earlier, Sigmund Freud had diagnosed schizophrenia as the result of one communicative structure—the Oedipal complex—Bateson allows these structures to take many forms, to be unmoored from a normative situation. By substituting communication for the language of pathology and psychology, and replacing performance with the representative function of language, both the work of representation and the function of illness are transformed. It is the inversion of psychosis from a pathology to an instrument for social research that makes new entities take precedent—methodology and measure. What had once been a vexing problem to be surmounted by science was now an opportunity for technical development.

The Emergence of Family Therapy

If the subject was decentered and networked to the world, then how might this affect those sciences most clearly related to subjectivity—mainly psychology and psychiatry? Bateson's model facilitated new attitudes to treating not only individual patients, but more importantly, patients in relationship to other individuals and the environment. In 1954 a young psychiatrist, Don Jackson, gave a talk at the Palo Alto Veterans Administration Hospital. Bateson engaged him afterwards. As Jackson related “the research bug bit ... From that moment on, I became more closely related to the social sciences than medical psychiatry.”^[31] Along with a number of other psychiatrists—particularly Jay Haley and John Weakland—involved with Bateson's research, and who were critical to developing the aforementioned model of the double bind, the group of young psychiatrists set up the Mental Research Institute (MRI) in 1958 in Palo Alto. Here they focused on group and family therapy. Their central goal was to apply ideas of communication and cybernetics to psychiatry and psychological therapy. This work also led to the production of

related addiction treatment programs.^[32]

Jackson emphasized the centrality of thinking at a social level even if curing individual patients. He emphasized that applying social science to psychiatry would break the field from what he labeled a "monadic," or individual-patient oriented, perspective inherited from psychoanalysis.^[33]

Central to this socialization of psychiatry were methods of therapy that created small ecologies or networks to study patient interactions at many levels. Family therapy was one of the critical forms first developed by influence of Bateson's work in the late 1950s at MRI.^[34]

Family therapy reframed disease away from individual subjects to interactions *between* subjects and objects. In his major manual for psychological training introducing communication-based techniques, Jackson recounted a number of cases from the clinic. He related, for example, the story of a young woman who bore a child out of wedlock and was also diagnosed with schizophrenia. Her parents wanted to care for the child due to their concerns over her health problems. Their major complaint involved her seemingly characteristic inability to make decisions to the point of pathology. Everyday actions such as choosing what to wear became obsessive and could take the whole day, preventing other activities and curtailing her ability to deal with other people. The initial clinical notes indicated that she appeared to suffer an inability to direct desire toward any particular object, impacting her ability to make choices to the point of affective disruption in relationality to other human beings. Her parents argued that this made her unable to care for a small child.

Normally, Jackson argued, if the patient was treated alone according to the conventions of the mid-1960s when he wrote, psychoanalytic therapy would only focus on probing personal links to the problem, histories of sexual behavior and violence, and so forth. Behavioral therapeutic intervention, on the other hand, would have been strictly physiological, medicating the patient with little concern for narrative or communication and focusing solely on physical outcomes and changes in action. Counter to these two opposing models of therapy—one psychological and one physiological—Jackson argued that ecological approaches open a practical space between raw medical and pharmaceutical intervention and strictly individual psychological and talk therapy.

Returning to the case of the affectively disturbed schizophrenic, Jackson explained that when the parents were brought into the session together, it became evident that they were excessively decisive, to the point of fault. The patient's withdrawal must be understood as a compensatory mechanism for the parents' over-performance of assertion. When the parents were studied separately, however, it became evident that they, too, were indecisive over many things, particularly their daughter's course of action and treatment. Taken together it might be said that the parents' performance to the daughter concealed and transferred their personal vacillations and insecurities onto the patient. The situation could then be reconsidered and therapeutic options explored that accounted for the whole scenario.

Documentary Methods

This was not only a frame shift in what constituted the fundamental unit of psychological intervention, but also a transformation in documentary practices. A number of groups at MRI adopted methods analogous to Bateson's work of filming in Bali, applying film, then videotape to therapy for replay and analysis. The introduction of film through two-way mirrors and by having cameras present in sessions refocused psychiatric assessment and therapeutic concern on new details. For example, therapists focused on experimenting and reflexively evaluating the timing of the lengths of the sessions. The tempo and cadence of conversation in the session, its form, became as much an object of study as the specific content of discussion between patients and doctors. The very feedback interaction both in gesture and language between the analyst and analysand was studied as much as the specific etiologies of any pathology.

Jackson explicitly analyzed the possible dependencies developing in the session between the analyst and the analysand. Reflexively, the communication paradigm made the therapy session itself, in his words, a "double bind" where the two figures of the patient and the therapist were taught to remain pathological to continue the interaction. This bind, arguably impossible for psychoanalysis to fully recognize, Jackson argued, could be made visible and therefore reprogrammable through the self-reflexive externality of the recording systems.^[35] Analysis itself became both the experimental set-up and the self-referential object of intervention and study.

This self-referential world without interiority or exteriority posed problems for the older histories of medicine and psychology with which it interacted. Jackson confessed to a concern with the psychoanalytic theories that inform but also must be split from in order to appropriate a model of ecology and communication. He argued that it was Freud who first introduced the family with little Hans, but that psychoanalysis was still focused on the individual. More importantly, Jackson's regular invocation of analysis as "monadic" but also "inspiring" demonstrated an in-built tension within these new methods. "Just as events point to increasing union between psychiatry, the family, and social science, there will be no such union in the main current of psychoanalysis for some time to come," Jackson lamented. The reason is that analysis often does a "disservice" to group and ecological therapies because family work is largely still couched in terms of the individual, and, even more importantly, analysts cannot handle more than one "transference" at a time. By

implication, Jackson hints at a discomfort, one of proximities and stable identities. He appeared to imply that if too many individuals projected onto the analyst, the analyst would be overwhelmed, and perhaps unable to retain control of the situation or of his or her own subjectivity.^[36]

What threatens the analyst's position, Jackson believed, could be reconciled by new methods in the social and human sciences. Analytic and medical authority, which was now threatened by the emergence of ecological approaches, instead refocused attention on data analysis and collection as a new virtue and mark of objectivity. A lot of data, reflexively analyzed, Jackson argued, might facilitate control of the situation in a way that direct observation could not.^[37]

But the sentiments of therapists demonstrated a set of concerns about dangerous proximities in both time and space between the bodies and minds of doctors and patients. If the therapist was now part of the system, then what was the therapist's relationship to the analysand? In psychoanalysis, which provided the bedrock of Bateson and Mead's research and still informed the practices at MRI, psychotic ailments had long provoked anxiety about the authority of the analyst over the analysand. Psychosis posed the possibility that psychoanalysis and transference were similar in redrawing the separations between subjects. If psychoanalysis as a method transgressed the boundaries of any individual ego, then its claims to scientific authority and distanced observation were in question. In fact, both critics antagonistic and amenable to Freud have noted that psychosis troubled him, and was never his favored object of research. In particular, schizophrenia—whose paranoid etiology is that of a falsely isolated subject under attack from the environment and external enemies—provoked anxious concern. There is something uncanny in the suffering of the paranoiac and in the efforts of scientists, politicians, and lawmakers to assert the absolute truth and inviolability of their models.^[38]

The discourses of schizophrenia give evidence of a residual anxiety within psychiatry and the human sciences about proximity and authority between bodies, subjects, and technologies. Cybernetic reformulations of mind—whether therapeutic or computational—continued to be plagued by older claims of truth, identity, and spatiality that are incommensurable, or merely incapable of being articulated as concerns within this new regime.

Repetition and Difference?

At stake in the emergence of psychotic logic was the stability of older histories of objectivity, truth, and documentation. The Viennese psychoanalyst Victor Tausk, in the wake of the First World War in 1919 was among the foremost to identify this problem, comprehending schizophrenia's dangerous relationship to paranoia when coupled with a desire for causality. "The schizophrenic influencing machine is a machine of mystical nature ..." Tausk wrote, "a large number of patients complain of all these ailments without ascribing them to the influence of a machine. Many patients consider the cause of all these alien or hostile sensations of physical or psychic change [as] ... emanating from enemies ... the idea of the influencing machine originates in the need for causality that is inherent in man"^[39] His analysis correlates temporality, machinery, and violence. He noted that schizophrenia is a new machine both lively and "mystical," related to other times and spaces in the human imaginary. But patients assume that this violence arrives from elsewhere, telecasted, from an external enemy. The fact that the world is self-produced, self-reflexive, and that the outside is emanating from within are impossible for the pathological patient to realize. This pathos emerges from the need for causality. It is a temporal problem, a desire for a history that can be explained, a teleological time where what happens is already accounted for. Tausk diagnosed a conflict between the subjective nature of perception and older fantasies of authority and knowledge.

But what are we to make of the midcentury revision of psychosis from a problem for knowledge and power to a technical instrument—into a game for policy, a therapy for groups? Schizophrenia can be productive, it is a "weakening," in Bateson's words, of the ego and an opening to the world, to the reception of signals. But the doppelganger to this condition is annihilation—repetition without difference—the result of being too closely married to one perceptual condition.

According to Bateson, schizophrenia takes on a pathological manifestation when the subject has no other, different, communicative situations to compare, contrast, or use, outside of the immediate message. Only diachronicity facilitates heterogeneity, rather than repetition, in potential actions within the rubric of communication theory and the double bind.

Such repetitions, however, are no longer defined as pathology, but as rationality within the postwar milieu. This analysis was not merely true of the Highland Balinese. Its greatest application, for Bateson, was to explain cultural conflicts in global systems.

In 1952 Bateson wrote to this effect in a letter to the cybernetician and MIT mathematician, Norbert Wiener. His words resonate with Tausk's original observations that the search for causality turns the schizophrenic patient paranoid. What was once personal and psychological is now, however, framed as a matter of large systems and networked politics:

What applications of the theory of games do is to reinforce the players' acceptance of the rules and competitive premises, and therefore make it more and more difficult for the players to conceive that there might be other ways of meeting and dealing with each other Now, it is necessary for Von Neumann to give birth to the "static" (and, therefore, ad hoc) theory before any theory of flux could be attempted—but I question the wisdom of the static theory as a basis for action in a human world. The theory may be "static" within itself, but its use propagates changes, and I suspect that the long term changes so propagated are in a paranoid direction and odious.^[40]

Bateson understood "static" games as producing conditions for action—but not for different possible actions, only repetitive cycles culminating in potentially genocidal violence (nuclear war in this case), or in his language a "paranoid direction."

Bateson was not against game theory. He did not yearn for a return to some fantasy of older scientific virtues of observation or positivist empiricism. In fact, Bateson went so far as to propose that these algorithmic theories analyzing patterns of behavior in terms of communication and rules were "necessary" to produce new theories.

But there appeared to be a threshold when what had begun as a model permitting self-reflexivity and innovation became a stuck mechanical automaton incapable of recognizing its own behaviors. The model, reading its own predictions as the actions of an external force, takes the paranoid direction of attempting to expunge this imagined intruder.

Bateson linked this turn, from creative to violent schizophrenia, to time. "No doubt in short time perspective the Rand people are right and have "useful" advice to offer on such subjects as intercepting hostile aircraft or bamboozling hostile diplomats In the long run, the application of the theory of games can only propagate the theory by reinforcing the hostility of the diplomats, and in general forcing people to regard themselves and each other as Von Neumannian robots."^[41]

Violent cathexis, in cybernetics as in psychoanalysis, was linked to a circuit that could not break; a message that continues to circulate without repression, resistance, or reorganization. For Bateson, recalling communication theory, one can only communicate in one's own time, and therefore the ability to bridge different times is also the ability to bridge multiple communication scenarios. And it is only the ability to attain another level or set of communication that can break the repetition of the same message and the descent into violence.

Bateson opened a talk delivered in the 1950s at the New School for Social Research, on "Bali and the Value of the Steady State," dealing with human survival to this effect; the talk was an assault on game theories. His argument was that they assumed the teleological, linear, and repeatable nature of a situation. Games cannot learn, they are processes that unfold, but the process itself has no relationship to time, history, evolution—their rules always/already know the future, and therefore, they eliminate it. He was thinking of nuclear war. These are repetitive processes without time, but ironically always framed in terms of prediction and change.^[42]

The horror of such computational approaches, therefore, is not at the locus of representation, but rather in their automation of the process of relationality—their standardization of communication, and technologization of change itself as a process to be modeled, replicated, repeated. Such systems take the collapse between materiality and representation—the vitality of their process—literally, making the world and the game the same, always reacting, but never changing. This is the destruction of temporality in its own name. This horror however is obscured when return is linked to causality, that return, if we will, to objectivity in Mead's voiceover, or authority in the RAND corporation's policy, that cannot be recognized as such because we are within the system. We are too close to what we study. Proximity is always a possibility for queer relationships and a terminal threat to perspective and subjectivity. Bateson's analysis implies that proximity physically may be desirable, but distance temporally is necessary for emergence.

Conclusion: Time, Differentiation, and Change in Cybernetic Loops

As a final consideration, perhaps we should reconsider the introductory scene. At the locus where older histories of colonial anthropology, medical treatments, and wartime propaganda were assimilated into the infrastructure for a new model of mind, animal, and machine, we can find the contours of an entirely new form of method and administration.

In the tortured tricks of the porpoise perhaps we begin to understand what difference might denote in cybernetics. The ability to avoid the descent into pathological situations is contingent on the ability to operate at a disjuncture from the synchronous moment of the command-response scenario. One must possess an archive of temporal relations to produce multiplicity. Bateson urged proximity in space between bodies, methods, and technologies, but a disjuncture or temporal distance from the scenario. The ability for an older neurosis to disrupt the seamless feedback loops is the only site of innovation now extrapolated to

the systemic level. Only this recombinant property opens to repetition with difference. But Bateson's porpoise also reminds us that that capacity is always inside our systems, that communication systems—whether animal, machine, or human—are always multiplex; the question is how to activate that de-jamming mode?

Bateson, therefore, understood schizophrenia as equivalent to play, but only if channeled into other modalities of being and not repetitively, and automatically, reenacted—without return. In Bali, he thought, he may have discovered one possible example of this alternative manifestation.^[43] But this “discovery” only emerges in his writings in the 1950s and 1960s as Bateson changes his negative attitude to the Balinese and fetishistically marvels at their avoidance of a violence that appears to occur all-too-often in the other exemplars of this condition.

This discovery of psychosis as emergent, a discovery that continues to reverberate in the present through our own methodologies in the social sciences and humanities, comes with a final adage. When he had originally been in Bali, Bateson had been unable to see this feature. He called the Balinese boring, plateaued, stuck, uncreative. He thought they were nonviolent, never recognizing the postcolonial civil war about to break out that would claim millions of lives, and that has not yet been resolved. We are left here with our own feedback loop, of what it means to feed back without return. This colonial situation made possible other forms of encounter, but could never be retrieved, like that lost *objet petit a* of Lacan—what do we make of this? Or perhaps, more likely, the “lack” Mead first described in the Balinese inability to express confrontation, causality, and culmination as in Western cultures: This absence rather than dialectical difference made cultures and psyches part of one circuit, a new medium for global communication. The historically specific transformation in relations between minds, bodies, and media is a source of violence, love, danger, and possibility—all operating at once inside our communication theories.

We might, then, contemplate the divide between self-reference and self-reflexivity implicit in the theory of the double bind. It is a fine line between producing a world that is only about the self and inducing the insular fanaticism of the paranoid, and making a world open to subjectivity, where the self becomes conscious of being decentered, peripheral, and dependent upon other entities for subjectivity and knowledge. It is also a fine line between telling history and returning to it. What does it mean to recognize the postcolonial history within our psychiatry, psychology, and computer culture? One must wonder: what desires and ghosts still haunt our machines and organizations? What forms of circuitry, or history, can disrupt the seamless flows of self-referential and personalized data in our present? The capacity to latently recognize that the subject is lagging from the present, but the residual result of an ecology of interacting with others is difficult. But it seemed possible in the cybernetic performances of control failure, evoked so powerfully for Bateson in animals.

Bateson erased a history of colonialism, empire, and even revolution in Indonesia to produce a seamless account of mind, while simultaneously offering the equipment to inspire others—most notably for contemporary readers, Gilles Deleuze and Félix Guattari—to rethink the ego and the subject in new formations. In replaying these many scenes, perhaps, we recognize what it is to both recover history, but not return to it.^[44]

In 1969 Bateson could still use schizophrenia as a discourse to engage systemic errors and elucidate control failures through the performance of experiments and the production of poetic lectures that prompted the fascination, revulsion, and interest of his psychiatric audience. Schizophrenia as a model could still reinvent difference *and* create new forms of violence.

Today in our discussions of terror, economy, or war, there is endless mention of paranoia, insanity, networks, psychosis, and ecology, but whether deployed as descriptions of a condition or critiques of a logic of governance, these discourses no longer appear to figure as machines for learning or change; they no longer make the uncanny nature of control visible. The paranoia and psychosis of our systems appears to return to us in the present as symptoms, rather than as diagnostic methods, as for Bateson.

Perhaps that is the success and failure of these histories: The automation of schizophrenia as a perceptual condition to the point of making it only a technology, whether in medicine or computing. It is perhaps not a side note that the next diagnostic and statistical manual for psychiatry, the DSM-V, no longer has a classification for the paranoid forms of schizophrenia at all. This omission demonstrates a historical fact—no longer appear to take pleasure, or suffer, at witnessing the dangerous cycles and marvelous interactions made possible by our nervous networks.

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Footnotes

1. Bateson had long possessed an interest in animals, regularly using accounts of their behavior to substantiate his observations of humans. He participated in dolphin research in the early 1960s in the Virgin Islands and in Hawaii. Mary Catherine Bateson, *With a Daughter's Eye: A Memoir of Margaret Mead and Gregory Bateson* (New York, NY: W. Morrow, 1984). [Return to text]

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3. For further information on the relationship between schizophrenia, creativity, difference and genius see: Irving Gottesman, *Schizophrenia Genesis: The Origins of Madness* (New York: W.H. Freeman, 1991); Shoshana Felman, *Writing and Madness* (Stanford: Stanford UP, 2003; and Sander Gilman, *Difference and Pathology: Stereotypes of Sexuality, Race, and Madness* (Ithaca: Cornell UP, 1985). [Return to text]
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6. An outdated term for schizophrenia. [Return to text]
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8. Margaret Mead and Gregory Bateson, *Ballinese Character: A Photographic Analysis* (New York: New York Academy of Sciences, 1942), Introduction. [Return to text]
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15. Mead and Bateson 1942: Introduction. [Return to text]
16. Russell 1999. [Return to text]
17. Steichen 1955. [Return to text]
18. Brand 1976. [Return to text]
19. Georges Didi-Huberman, *The Invention of Hysteria: Charcot and the Photographic Iconography of the Salpêtrière*, ed. J. M. Charcot (Cambridge: MIT, 2003). [Return to text]
20. David Lipset, *Gregory Bateson: The Legacy of a Scientist* (Englewood Cliffs: Prentice-Hall, 1980) 151. [Return to text]
21. It should be noted that structuralist anthropology engaged heavily with linguistics, communications theories, and cybernetics at the time, and must be seen as closely related to Mead and Bateson's efforts. See also Claude Lévi-Strauss's work in the *The Savage Mind and Structural Anthropology*. [Return to text]
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23. Quoted in Lipset 1980: 174. [Return to text]
24. Steve Heims, *The Cybernetics Group* (Cambridge: MIT, 1991). [Return to text]
25. Lipset 1980, Bateson et al. 1956. [Return to text]
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27. Bateson 2000 [1972]. [Return to text]
28. Bateson 2000 [1972]: 175-77. [Return to text]
29. Bateson 2000 [1972]: 109. [Return to text]
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40. Gregory Bateson, Letter to Norbert Wiener, September 22, 1952 (Norbert Wiener Papers, Massachusetts Institute of Technology, MC22, Box Number: 10, Folder 155). [Return to text]
41. Bateson 1952. [Return to text]
42. Bateson 2000 [1972]: 107-27. [Return to text]
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TAGS

COLONIALISM DIFFERENCE EPISTEMOLOGY HISTORY PSYCHOANALYSIS QUEER SCIENCE TECHNOLOGY
TRANSNATIONAL