

**foucault and information
theory: on message or noise?
(1966)¹**

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“Message or Noise?” is a short but highly suggestive essay, in which Michel Foucault takes up the question of medical thought and practice through the frame of information-theory – one of the few occasions throughout his enormous œuvre in which he directly engages with the question of the computational. Despite being included as text 44 of the *Dits et Écrits*,² the piece has not before been translated into English, and has led a somewhat subterranean life within Foucault’s reception. Amidst a renewed interest in the impact of cybernetics and information theory on French structuralist and post-structuralist thought, and indeed within something of a neocybernetic turn in critical theory *tout court*, the

significance of the piece comes into focus – even if Foucault’s analysis is perhaps conducted in an ambiguous or somewhat ironic frame. Here I establish the context of its publication, reception, and place in contemporary debates surrounding information theory in the French academy, especially in relation to the more anxious critique of information theory offered by Foucault’s mentor Georges Canguilhem. I also consider the significance of new archival resources which show Foucault was an attentive reader of developments in information theory and cybernetics from even very early in his career, and suggest some potential future research paths regarding Foucault and information theory towards which “Message or Noise?” gestures.

THE CODE AND THE NATURE OF MEDICAL THOUGHT

“Message or Noise?” (“Message ou Bruit?”) was published in 1966, the same year as *Les Mots et les Choses*, later translated into English as *The Order of Things*,³ and the piece recapitulates the periodisation and framing of this text, as well as Foucault’s 1963 “archaeology of medical perception,” *La Naissance de la Clinique* (*The Birth of the Clinic*).⁴ In “Message or Noise?” the explicit critical target is what Foucault identifies as those “humanist homilies” (*humanismes bénisseurs*) which would valorise the task of medicine and the vocation of the physician as an intimate knowledge of the message or messages sent by a suffering “human being”. It is not “the human,” Foucault argues, that doctors, or the medical institution more broadly, attend to – rather it is “noise,” the “non-silence of the organs” that medicine approaches as a challenge of “decoding.”

The piece is Foucault’s contribution to a “Colloquium on the Nature of Medical Thought,” convened in the pages of French medical journal *Le Concours Médical* by the psychiatrist Cyrille Koupernik. The debate begins in Volume 88, Issue 42 of the journal (October 15, 1966), featuring contributions from Cochin Hospital’s Chair of Clinical Medicine Henri Péquignot, physician and director of *Concours Médical* Jean Robert Gosset, gastroenterologist Jean-Jacques Bernier, and medical journalist Raymond Lepoutre. Foucault’s article appeared in the following week’s

edition, Volume 88, Issue 43 (October 22, 1966), alongside a response by historian and philosopher of science François Dagognet titled “Le Tour de Babel” (“The Tower of Babel”).⁵

The terms of the colloquium’s discussion are set by Koupernik in his “introductory note” – “There are good doctors who regularly make precise diagnoses. How is it that they proceed,” he asks “and are they conscious of the steps that their mind takes?”.⁶ Koupernik goes on to offer his own account and theory of what he terms the “simultaneity” of medical thought:

I have insisted upon the fact that the doctor must listen in two ways; one which allows him to develop nosological and diagnostic hypotheses...the other to discern, in the account (*récit*) of the patient, what Balint calls the “message”. Balint is free to believe that the message is what is most important; to me it seems crucial to make clear that during the examination, this message must be processed (*traité*) the same way as one would the programme of a pirate-radio station which is interfering with the programme that one wants to listen to (even if this means having to return to the pirate-station).⁷

Koupernik here refers to the Anglo-Hungarian psychoanalyst Michael Balint, author of *The Doctor, His Patient, and the Illness*.⁸ In *The Doctor* Balint argues for what would come to be termed “patient-centred” as opposed to “illness-centred” medicine as the ideal mode of clinical practice.⁹ Balint held that doctors should seek to better understand the lived and psychodynamic dimensions of their patients’ conditions, rather than imposing upon their patients a model of how an illness “ought” to be experienced.¹⁰ Koupernik is essentially arguing for the opposite in his normative account of clinical diagnosis – “Physical examinations and any ‘para-clinical’ explorations constitute probings aimed at either validating or invalidating the identification of a clinical entity with a nosological [(disease classificatory)] model.”¹¹ A patient’s personal account of their illness is a necessary part of the clinical encounter, but one which for Koupernik risks concealing or distorting as much as it reveals.

This is the context of the discussion that Koupernik establishes and into which Foucault enters. It is worth noting that, without using the term, it is Koupernik who establishes the metaphor of “noise” by drawing the idiosyncratic comparison to a pirate radio station. Patients’ own accounts of their illness are, for Koupernik, an illegitimate or rogue blast of noise distorting the “correct” signal of the illness’s identity. The role of the good doctor with regard to this noise is essentially to “tune it out,” insofar as this is possible. Foucault’s contribution is unsurprisingly highly critical of what he sees as the clichéd, humanist position of Balint – but at the same time it both takes up and displaces the model offered by Koupernik.

Foucault argues that Koupernik and the other participants’ contributions have prompted for him the question of whether “the theory of medical practice should not perhaps be rethought, no longer in terms drawn from positivism, but from those practices which are currently being formulated in the analysis of languages, or in information processing.” He critiques the humanist understanding of the doctor’s role as one of listening to the messages that the body sends, of hearing and interpreting them, since he argues that

illness does not send a “message,” since a message depends upon a “code” established according to set rules. There is no code in nature, however unnatural (*dénaturée*) this may seem. Illness is happy just to “make noise” (*faire du bruit*) – and that is all well and good. It is medicine which does all the rest of it; and in fact it does much more than it is willing to recognise.

In accordance with his critique of the “feebly eroticized encounter” between doctor and patient in *The Birth of the Clinic*¹² Foucault argues moreover that

In his practice, the doctor attends, certainly not to a patient, but nor to someone who suffers, and above all, thank God, not to a “human being”. He attends neither to the body, nor to the soul, nor to both at once, nor to a combination of the two. He attends to noise. Through this noise, he must hear the elements of a message.

He argues that when we discuss changes in medical knowledge and practice, we are referring to a change in the codes used by medicine to establish coherence over this “non-silence of the organs.” He proposes however that when these codes change, it is necessary to bear in mind that “this gain over noise has not yet been secured by a unique code, and perhaps never will be. Maybe a new gain will be made, but this would be thanks to a new code, etc. Since illness has nothing to say, there is no reason that a single code will come to “informatize” (*informer*) all of this noise.”

Foucault’s analysis accords in a certain sense with Koupnik’s critique of Balint, while diverging from it in at least two important aspects. For one, against the Koupnikian critique of the patient’s own account of their illness, Foucault acknowledges the significance of Freud’s Copernican revolution. Freud’s talking cure, in affirming the legitimacy of the patient’s account of their own symptom, established for Foucault “a new domain” and a new code that “made out of the verbal statements of the mad (*énoncés verbaux des malades*), which had hitherto been considered noise, something which could be treated as a message.” The significance of Freud’s “new domain” here will be familiar to readers of *The Order of Things*, in which Freud’s emergence “indexes a vast shift [that] led the human sciences from a form more dense in living models to another more saturated with models borrowed from language.”¹³ Secondly, Foucault’s account also complicates what might be considered the “hierarchical” account of noise that Koupnik’s “pirate radio” metaphor establishes. For Foucault, medicine does not strain to hear through the “noise” of the patient the proper signal of the sick body. For Foucault there is no proper signal as such, but only noise all the way down – a noise which might be endlessly attended to and recoded without arriving at a definitive interpretation. Or, put otherwise, Freud’s example demonstrates that what’s playing on Radio Caroline might be just as informative as the edicts of BBC Radio 1. The important thing is how one listens, even if this way of listening is never assured, final, or “proper” (both in the sense of being correct as well as “clean”).

FRENCH THEORY AND INFORMATION THEORY

“Message or Noise?” is remarkable for being one of the relatively few times Foucault directly takes up the language of information theory, here as a way of refiguring his theses around medical power and the historicization of representation in *The Birth of the Clinic* and *The Order of Things*. The theory and historiography surrounding cybernetics and information theory is vast and complex (and as shall be discussed later, Foucault was a broad and well-informed reader in the field). A key reference point for the context of Foucault’s intervention is the definition and theorisation of “noise” in Claude Shannon and Warren Weaver’s celebrated “sender-receiver” model of communication.¹⁴ In the sender-receiver model information is theorised in non-semantic and mathematical terms. By quantifying information Shannon and Weaver seek to determine the optimal means through which to construct a communications channel by which a sender at one end is able to send a message to a receiver at the other end of the channel, without the message being corrupted and altered by “noise” along the way. Information here is defined as the number of possible messages which could be sent along a channel,¹⁵ while “noise” refers to the degree of uncertainty present in the channel, which increases the greater the number of possible messages which one can send.¹⁶ One paradox of the model is that this “noise” can never be totally eliminated without also eliminating the information source, since noise derives from the capacity for difference which is exhibited by information. Noise and its corrupting influence can never be wholly eradicated from a communications channel, but only modelled and “managed” within certain limits.

The influence of information theory and its sister discipline cybernetics on post-war French philosophy has been critically analysed by authors including Vincent Descombes,¹⁷ Céline Lafontaine,¹⁸ Lydia Liu,¹⁹ Stefanos Geroulanos,²⁰ and most recently and perhaps comprehensively, in Bernard Dionysius Geoghegan’s *Code: From Information Theory to French Theory* (2023).²¹ In *Code* Geoghegan traces a dense thicket of connections between pre-war US engineering and anthropological

research and the post-war dissemination of cybernetics and information theory within French academia (and subsequently of course back across the Atlantic, in the repackaged form of *soi-disant* “French Theory”). The reception of information theory in France “supported a decisive turn from categories like intention and authorship to those of signification and systems,” organising a new discourse around the “human sciences.”²² Geoghegan charts this influence through a close reading of several major works, including Roland Barthes’ analysis of the “codes” of culture,²³ Claude Lévi-Strauss’s structuralist anthropology,²⁴ and Jacques Lacan’s seminar on the purloined letter.²⁵ Geoghegan’s analysis of Lacan, for instance, describes the way that he at once exalted in a stochastic account of the symbolic order while simultaneously emphasising the challenge and aporia posed by the necessity of noise, distortion, error, and inconsistency within communication itself.²⁶ Geoghegan notes that beyond the above thinkers, many French theorists engaged in an “ironic experimentation” with the language of information theory, citing Foucault’s “Message or Noise?” as one such example.²⁷ To what extent then should we understand Foucault’s engagement with the language of code, decoding, noise, and so forth, as a “serious” intellectual engagement, as opposed to modish riffing on a *de rigueur* intellectual apparatus regarding which he notably made little subsequent commentary?

THE HISTORICAL A PRIORI AND THE TECHNICAL A PRIORI

“Message or Noise?” has largely been obscured in the anglophone reception of Foucault’s work. In Germany the piece was translated for a 1999 collection of Foucault’s writings on media and technology by Friedrich Kittler, the founding figure of “German Media Theory.”²⁸ Foucault’s archaeological method was deeply influential for Kittler, but from his perspective neglected the technical dimension of the archive. The infamous opening line of Kittler’s *Gramophone, Film, Typewriter* identifies the starting point of his approach – “Media determine our situation, which – in spite or because of it – deserves a description.”²⁹ This statement glosses a similar point, expressed in slightly less confrontational and more precise language, in *Discourse Networks 1800/1900*, that “Technologically

possible manipulations determine what in fact can become a discourse.”³⁰ Key to Kittler’s approach is to transform Foucault’s *historical a priori* into a *technical a priori*, and Foucault’s neglect of the technical substrate of the discourses he analyses comes to comprise for Kittler a flaw in the archaeological project:

His concept of the archive – synonymous with the library in Foucault’s research methods, if not in his theory – designates a historical a priori of written sentences. Hence discourse-analytic studies had trouble only with periods whose data-processing methods destroyed the alphabetic storage and transmission monopoly, that old-European basis of power. Foucault’s historical research did not progress much beyond 1850.³¹

“Message or Noise?” is suggestive of a more “Kittlerian” (and more contemporary) Foucault who would be attuned to the question concerning media technology, even if he would remain unwilling (or, by Kittler’s reckoning, unable) to pursue a fully “determined” account of the information theoretical – “set sail from the solid shores of his libraries out into the open sea of media technologies, until Wiener’s and Shannon’s mathematical concept of information appeared on the horizon”.³² For one of Kittler’s most celebrated protégées, the media archaeologist Wolfgang Ernst, “Message or Noise?” has indeed functioned as a way of grafting a certain “informatized” version of Foucault onto Kittler (or vice-versa). The phrase “Message or noise?” reappears throughout Ernst’s writings as a kind of refrain and a summation of what is taken as Foucault’s lesson – “Power means *what* remembers, rather than *who*, as we have learned from Foucault.”³³ It is the code and not the hermeneuticist which is decisive in this interpretation, or perhaps radicalisation, of Foucault’s thesis.³⁴

Certainly “Message or Noise?” does not represent a version of Foucault in which the question of the technological entirely displaces his established account of the archive. For one thing, Foucault’s use of the “noise” metaphor is deliberately ahistorical. He explicitly uses it to describe the function of medical discourse “over the last 150 years” – that is to say, broadly coincident with the emergence of a new

discourse of medical power in the wake of the French revolution (as described in *The Birth of the Clinic*), rather than the mid 20th century birth of information theory. The piece is also, as noted, responding to a somewhat arcane metaphor proposed by Koupernik at the outset of the debate. But this is not to suggest that the piece is not seriously concerned with the challenge posed by information theory for rethinking the status of medical knowledge or the biopolitical.

NOISE AND NON-SILENCE: CODE FOR CANGUILHEM

Another path into “Message or Noise?” is to consider it in dialogue with the contemporary work of Foucault’s close friend and mentor Georges Canguilhem. Foucault at one point refers to the noise of the body as “this non-silence of the organs.” This is undoubtedly a reference to the famous dictum of surgeon and Collège de France chair of experimental medicine René Leriche, that “Health is life lived in the silence of the organs (*La santé, c’est la vie dans le silence des organes*) while disease is what irritates men in the normal course of their lives and work, and above all what makes them suffer.”³⁵ The same phrase is closely analysed by Canguilhem in his most famous work, *Le Normal et le Pathologique*, which went through several editions and amendments after its initial 1943 publication, the most significant of these in 1966 (the year that “Message or Noise?” was published) when it was reissued with several additional essays. It was later translated into English with an introduction by Foucault as *The Normal and the Pathological*.³⁶ It would thus seem reasonable to suggest that Foucault had Canguilhem in mind when he penned this contribution on medical diagnostics for *Concours Médical*.³⁷ It is moreover perhaps possible to read the entire piece as a kind of punning critique, in which Foucault would set his *bruit* against Canguilhem’s *non-silence* (and indeed, Koupernik’s *station-pirate*).

The significance of Leriche’s thesis for Canguilhem was that it suggested a path beyond the positivist nineteenth century conception of illness as a quantitative deviation from the state of good health.³⁸ Canguilhem is critical of an understanding of good health as the maintenance of certain biological parameters determined in

a laboratory setting. To instead conceptualise health as “silence” and disease as “disturbance” is for Canguilhem to draw attention to the significance of “vital norms” – the capacity for life to creatively overcome challenges posed within its *milieu*, to produce those “concepts” which would be adequate to such exigency. To understand pathology from the perspective of “suffering” seems perhaps to put Canguilhem close to Balint’s perspective. But Canguilhem’s “vital rationalism” was opposed to any bifurcation between reason and the experience of the living.³⁹ Canguilhem instead held “that life as such produces knowledge, that there is nothing essentially irrational about its power, as is assumed by those who oppose life to thought.”⁴⁰

In February 1966 Canguilhem delivered two lectures at Saint-Louis University in Brussels, which in May were published in the *Revue Philosophique de Louvain* as “Le Concept et la Vie” (“Life and the Concept”).⁴¹ Here Canguilhem grapples with the significance of the DNA revolution, which would reframe biology in terms drawn from information theory – the reproduction of life now organised around a theoretical apparatus of code, copies, errors, etc. Canguilhem also discussed the problematic of errors in genetic encoding in one of the new essays in the 1966 edition of *The Normal and the Pathological*, “A New Concept in Pathology: Error.”⁴² As Canguilhem scholar Samuel Talcott argues, new developments in molecular biology seemed to partially confirm his established philosophy of biology, but at the same time occasioned a profound anxiety.⁴³ On the one hand the model of “life as code” and of an account of new forms of life as resulting from the mutations of encoding errors seemed to confirm Canguilhem’s thesis that “concepts are indeed immanent to life, and that this is now better established as an ability to stray or err that is inherent within living things long before the appearance of science.”⁴⁴ But at the same time, he was troubled by the emergence of the concept of genetic diseases – of the negation of suffering as the criterion of intervention in favour of new possibilities for pre-emptive action and even the hubristic perfection of the living (think for example of the possibility to screen in the womb for genetic markers of future disorders). This approach risks forgetting the ethical significance of the

“difficulty of living” and hence medicine’s “raison d’être.”⁴⁵ If for Canguilhem pathology begins with the “non-silence of the organs,” genetic therapy offers the troubling prospect of this non-silence being permanently snuffed out, of medicine as a “hunting for heterodox genes, of a genetic inquisition.”⁴⁶ Several readers have argued that Canguilhem feared the neo-eugenicist potentials of such a paradigm – a medicine cast adrift from the “non-silence” of the suffering body, and hence from its classical relation to the rigour and creativity of vital norms.⁴⁷

Such an anxiety seems far from Foucault’s more sanguine and ironic account of the significance of information theory for refiguring medical epistemology. Foucault would seem to concur with Canguilhem to the extent that the “noise” of the patient here loses the status that “non-silence” held as a kind of hermeneutic lodestar – it does not gesture towards a deeper essence of the living, it is simply noise *tout court*. But rather than seeing this as a crisis, it invites the opportunity to rethink the hoary pieties of the physician’s vocation. In this the piece can be seen to partly prefigure Foucault’s later commentary in his review⁴⁸ of the French geneticist and Nobel prize winner François Jacob’s *La Logique du Vivant* (*The Logic of the Living*).⁴⁹ In that work, Jacob argued that modern biological science had successfully dethroned “life” from its exalted metaphysical status, such that “Life is no longer investigated in laboratories today. One no longer seeks to grasp its contours. [Biology] endeavours only to analyse living systems, their structure, their function, their history...Today it is the algorithms of the living world that interest biology.”⁵⁰ In his review of *The Logic* Foucault, less guarded or ironic than in “Message or Noise?,” expresses a profound admiration for this “disquieting” perspective, that “the dice govern us” even in our very biology,⁵¹ and its consequence that “[o]ne must no longer dream of life as the grand, continuous and attentive creation of individuals. One must think the living thing as the calculable play of chance and reproduction.”⁵² To return for a moment to German Media Theory, if Kittler understood the significance of focussing on the technical materiality of the archive as an anti-humanist project of “expelling the spirit (*Geistes*) from the humanities (*Geisteswissenschaften*),”⁵³ then Foucault here

perhaps pre-empts his own “radicalisation” within Kittler’s critique. Information theory desacralizes life, enframing it as the “mere” stochastic variation of the living and the history of its errant mutations – but also liberates it as such from the assumptions underpinning the authority of medical power to fix and determine life’s “proper” path.

FOUCAULT AS READER OF INFORMATION THEORY – READING FOUCAULT AS INFORMATION THEORIST

There is more to be done to give a full account of Foucault’s engagement with information theory and cybernetics (and certainly much more than is possible within this short introduction). Recent archival work for example has suggested that Foucault was reading closely in information theory from even very early in his career, as well as during his preparation of the manuscript of *The Birth of the Clinic*. The *Foucault: Fiches de Lecture* project has since 2020 made available 27 boxes and nearly 19000 digitised pages of Foucault’s reading notes, with the aim of “enabling a new approach to Foucault’s work, one based upon the philosopher’s reading practices and the paths of his thought which his notes help us to retrace.”⁵⁴ The *fiches* produced by the “young Foucault” of the early 1950s⁵⁵ include note-taking organised around topics including “Cybernetics and Neurology,” “Cybernetics and Psychopathology,” “Perception and Information,” and, of particular interest in relation to “Message or Noise?,” “The Two Types of Information in the Human Body.”⁵⁶ Moreover, Box 36 of the archive collects materials related to the writing of *The Birth of the Clinic*, and these include notes on cybernetics and information theory, such as “Shannon’s Information Theory,” “Information in Cybernetics,” “Message processing,” and “Message and Signal”⁵⁷ (which to my knowledge have not yet been the subject of a close analysis). In this light, it is possible to read “Message or Noise?” less as a refiguring of Foucault’s earlier theses on medical power, and more as the remarking of a certain path of thought which had, in its original iteration, been written in only very faint ink. It would doubtless be a generative project to return to *The Birth of the Clinic* with these notes in mind. For example the passages on René Laënnec’s development of the stethoscope,

which Foucault describes as a “technical mediation” which “solidified distance, transmit[ting] profound and invisible events along a semi-tactile, semi-auditory axis” would be very much open to rereading as an information theoretical model of the power dynamics of clinical auscultation.⁵⁸

In an era of generative AI, ubiquitous computing, and cascading automation,⁵⁹ the question of critical theory’s response to the challenge of the informational is certainly no less urgent than it was in 1966. Historiographies like Geoghegan’s demonstrate the degree to which critical theory was always already *en rapport* with this problematic, while thinkers such as Yuk Hui have suggested the necessity of revisiting the epistemological questioning of this era in order to formulate a “cybernetics for the 21st century.”⁶⁰ If “Message or Noise?” is not necessarily a decisive intervention in this project, it is a highly suggestive one – a provocative challenge to think the consequence of informatisation for clinical practice, medical power, and the metaphysical status of the living.

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NOTES

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2. Michel Foucault, "Message ou Bruit?" in *Dits et Écrits* Vol. I, ed. Daniel Defert, François Ewald and Jacques Lagrange (Paris: Gallimard, 2001), 585-588. Originally published in *Le Concours Médical* 88, no. 43 (October 1966): 6285-6286.
3. Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences*, trans. Alan Sheridan (London and New York: Tavistock/Routledge, 1970).
4. Michel Foucault, *The Birth of the Clinic: An Archaeology of Medical Perception*, trans. Alan Sheridan (New York: Pantheon, 1973).
5. With profound thanks to Stuart Elden for the provision of a copy of the original article. Elden's website *Progressive Geographies* also includes further details surrounding the initial publication of "Message or Noise?" see < <https://progressivegeographies.com/2022/02/02/%EF%BF%BCmessage-ou-bruit-resituating-a-short-text-by-foucault-on-medicine/>>.
6. Cyrille Koupernik, "Colloque sur la Nature de la Pensée Médicale: Note Introductive," *Le Concours Médical* 88, no. 42 (October 1966): 6101-6102.
7. Koupernik, 6101-6102.
8. Michael Balint, *The Doctor, His Patient and the Illness* (London: Pitman, 1957). This text was translated into French by Jean-Paul Valabrega as *Le Médecin, son Malade et la Maladie* (Paris: Payot, 1960).
9. Although these terms were only coined to describe the project later, by Balint's wife and collaborator Enid Balint. See Enid Balint, "The Possibilities of Patient-Centered Medicine," *The Journal of the Royal College of General Practitioners* 17, no. 82 (1969): 269-276.
10. Balint, *The Doctor*, 216.
11. Koupernik, 6101.
12. Foucault, *The Birth of the Clinic*, xv.
13. Foucault, *The Order of Things*, 392.
14. Claude Shannon, "A Mathematical Theory of Communication." *The Bell System Technical Journal* 27, no. 3 (1948): 379-423, and Claude Shannon and Warren Weaver, *The Mathematical Theory of Communication* (Urbana: University of Illinois, 1949).
15. Shannon and Weaver, *Mathematical Theory*, 9.
16. Shannon and Weaver, *Mathematical Theory*, 18-22.
17. Vincent Descombes, *Modern French Philosophy*, trans. L. Scott-Fox and J.M Harding (Cambridge: Cambridge University Press, 1980).
18. Céline Lafontaine, *L'empire Cybernétique: des Machines à Penser à La Pensée Machine* (Paris: Seuil, 2004).
19. Lydia Liu, "The Cybernetic Unconscious: Rethinking Lacan, Poe, and French Theory," *Critical Inquiry* 36, no. 2 (2010): 288-320.
20. Stefanos Geroulanos, *Transparency in Postwar France: A Critical History of the Present*. (Stanford: Stanford University Press, 2017). See also Stefanos Geroulanos and Leif Weatherby, "Cybernetics and the Human Sciences," *History of the Human Sciences* 33, no. 1 (2020): 3-11.
21. Bernard Dionysius Geoghegan, *Code: From information theory to French theory* (Durham NC:

Duke, 2023). See also his “From Information Theory to French Theory: Jakobson, Lévi-Strauss, and the Cybernetic Apparatus,” *Critical Inquiry* 38, no. 1 (2011): 96–126. Another excellent contribution in this vein is Vincent August’s “Network Concepts in Social Theory: Foucault and Cybernetics,” *European Journal of Social Theory* 25, no. 2 (2022): 271–91. August argues that cybernetic accounts of the network were an influence upon Foucault’s structuralist method, and conducts a critical reading of several of Foucault’s works, including “Message or Noise?,” in this light.

22. Geoghegan, *Code*, 9.

23. See Roland Barthes, *S/Z*, trans. Richard Miller (New York: Hill and Wang, 1974).

24. See Claude Lévi-Strauss, *Wild Thought*, trans. Jeffrey Mehlman and John Leavitt (Chicago: University of Chicago Press, 2021).

25. See Jacques Lacan, “Seminar on the Purloined Letter” in *Écrits*, trans. Bruce Fink, in collaboration with Héloïse Fink and Russell Grigg (New York/London: W.W Norton and Company, 2002), 6–50.

26. Geoghegan, *Code*, 145–147.

27. Geoghegan, *Code*, 124, n93.

28. “Botschaft oder Rauschen?” in *Michel Foucault, Botschaften der Macht. Der Foucault-Reader: Diskurs und Medien*, ed. Jan Engelmann (Stuttgart, Deutsche Verlags-Anstalt, 1999), 140–144. Kittler also wrote a short introduction for the collection – “Zum Geleit,” 7–9.

29. Friedrich Kittler, *Gramophone, Film, Typewriter*, trans. Geoffrey Winthrop-Young and Michael Wutz (Stanford: Stanford University Press, 1999), xxxix.

30. Friedrich Kittler, *Discourse Networks 1800/1900*, trans. Michael Metteer and Chris Cullens (Stanford: Stanford University Press, 1990), 232.

31. Kittler, *Discourse Networks*, 369.

32. Kittler, “Zum Geleit,” 8. The translation is by Geoffrey Winthrop-Young, from his discussion of the piece in “Krautrock, Heidegger, Bogeyman: Kittler in the Anglosphere,” *Thesis XI* 107, no. 1 (2011): 6–20, at 16.

33. Wolfgang Ernst, *Stirrings in the Archives: Order from Disorder*, trans. Adam Siegel (London: Rowman and Littlefield, 2015), 53. For the use of “Message or noise?” as a refrain, see the collection of his writings *Digital Memory and the Archive*, trans. Jussi Parikka (Minneapolis: University of Minnesota, 2013), at 66, 128, and 181.

34. For a critical account of Kittler’s reading of Foucault, see Thomas Sutherland and Elliot Patsoura, “Michel Foucault, Friedrich Kittler, and the Interminable Half-Life of ‘So-Called Man,’” *Angelaki* 22, no. 4 (2017): 49–68.

35. The original phrase is found in *L’Être Humain. Vol. 6 of Encyclopédie Française*, ed. René Leriche. (Paris: Société de Gestion de l’Encyclopédie Française, 1936). The translation of the full quote is by Stefanos Geroulanos, from his discussion of Leriche and Canguilhem in *Transparency*, 212.

36. Georges Canguilhem, *The Normal and the Pathological*, trans. Carolyn Fawcett and Robert Cohen, (New York: Zone Books, 1991).

37. Michel Serres, who was for a time very close with Canguilhem, also discusses Leriche and this phrase in an informational-theoretical frame in *The Parasite*, itself a pun on the French word for “white noise” (*le parasite*). See Michel Serres, “Of Sickness in General,” in *The Parasite*, trans. Lawrence R. Schehr (Minneapolis: University of Minnesota Press, 2007), 197–198.

38. See Stuart Elden, *Canguilhem* (Cambridge: Polity, 2019), 15–17.

39. See Paul Rabinow, “A Vital Rationalist,” in *A Vital Rationalist: Selected Writings from Georges*

- Canguilhem, ed. François Delaporte, trans. Arthur Goldhammer (New York: Zone, 1994), 11-22.
40. Paola Marrati and Todd Meyers, "Life, as such," in *Knowledge of Life*, ed. Paola Marrati and Todd Meyers, trans. Stefanos Geroulanos and Daniela Ginsburg (New York: Fordham University Press, 2008), vii-xii.
41. Collected in abridged form as "Knowledge and the Living" in *A Vital Rationalist*, 287-319.
42. *The Normal and the Pathological*, 275-288.
43. Samuel Talcott, "Errant life, molecular biology, and biopower: Canguilhem, Jacob, and Foucault," *History and philosophy of the life sciences* 36, no. 1 (2014): 254-279. See also Samuel Talcott, *Georges Canguilhem and the Problem of Error* (Cham: Palgrave Macmillan, 2019), 280-288.
44. Talcott, "Errant Life," 265.
45. Talcott, "Errant Life," 279-280.
46. Talcott, "Errant Life," 280.
47. More precisely, several thinkers have argued that Canguilhem's experience as a *résistant* during the Nazi occupation is key to understanding the political stakes of Canguilhem's philosophy of biology. See Elden, *Canguilhem*, 30; Geroulanos, *Transparency*, 216; Roberto Esposito, *Bios: Biopolitics and Philosophy*, trans. Timothy Campbell (Minneapolis: University of Minnesota Press, 2008) 188-189; and Talcott, "Errant Life," 261-262.
48. Michel Foucault, "Croître et multiplier [1970]" in *Dits et Écrits* Vol. I, ed. Daniel Defert, François Ewald and Jacques Lagrange (Paris: Gallimard, 2001), 967-972. See also Foucault's brief but interesting discussion of information theory in the life sciences in the recently published lecture "Linguistics and Social Sciences," trans. J Schroeder and C Wright, *Theory, Culture and Society* 40, no. 1-2 (2023): 259-278, at 264.
49. Translated as *The Logic of Life: A History of Heredity*, trans. Betty E. Spillman (New York: Pantheon, 1973).
50. Cited with Talcott's translation in "Errant Life," 269.
51. Talcott, "Errant Life," 267.
52. Talcott, "Errant Life," 271. In "Errant Life," Talcott also argues that Foucault's reading of Jacob marks a critical distance between his own and Canguilhem's philosophy.
53. From the polemical title of a collection of writings edited by Kittler, *Austreibung des Geistes aus den Geisteswissenschaften. Programme des Poststrukturalismus* (Paderborn: Schöningh, 1980). See Geoffrey Winthrop-Young, "On Friedrich Kittler's 'Authorship and Love,'" *Theory, Culture and Society* 32, no. 3 (2015): 3-13.
54. Équipe FFL, "Présentation du Projet," *Foucault: Fiches de Lecture*. Accessed 24/05/2024. Available at < <https://eman-archives.org/Foucault-fiches/objectifs-projet>>.
55. Close readings of other parts of these reading notes have informed work by scholars such as Stuart Elden and Elizabetta Basso. See Stuart Elden, *The Early Foucault*, (Cambridge UK: Polity, 2021); Elizabetta Basso, *Young Foucault: The Lille Manuscripts on Psychopathology, Phenomenology, and Anthropology, 1952-1955*, trans. Marie McDonough (New York: Columbia University Press, 2022).
56. The actual source-text for this last set of notes is not marked, but Foucault's writings on the relation between the "nervous" and the "humoral" suggest that he was here reading the "Computing Machines and the Nervous System" chapter from Norbert Wiener's seminal *Cybernetics: or Control and Communication in the Animal and the Human Machine* (Paris, Hermann and Cie: 1948). Foucault's notes also make reference to the concept of a "to-whom-it-may-concern" message, which Wiener also introduces in this chapter, and which Foucault translates as a "qui peut-être concerné par le message". When Wiener's bestseller *The Human Use of*

Human Beings (Boston, Houghton Mifflin: 1950) was translated into French as *Cybernétique et Société* (Paris: Deux Rives, 1952), the anonymous French translator rendered this concept as “les messages...aux intéressés” (108). Foucault’s own (more metaphrastic) translation suggests then that he was likely reading Wiener in the original English. Foucault’s reading notes moreover demonstrate that he was in this same period reading relatively widely in Anglo-American cybernetic and information theory – including work by Donald McKay and Warren McCulloch (“The Limiting Information Capacity of a Neuronal Link,” *The Bulletin of Mathematical Biophysics*, 14, 1952: 127-135, in Box 44B-30) and W. Ross Ashby (notes on “Principles of Cybernetics,” also in Box 44B-30).

57. All in Box 36-25 – “L’information”.

58. *Birth of the Clinic*, 163-164. It should be noted that the sound theorist Lauri Siisiäinen has in fact drawn a connection between this chapter and “Message or Noise?,” though Siisiäinen’s formulation of a Foucauldian politics of the auditory does not take up the question of the significance of information-theory for the epistemic status of this “noise”. See Lauri Siisiäinen, *Foucault and the Politics of Hearing* (Abingdon: Routledge, 2013), 31-34.

59. See Mark Andrejevic, *Automated Media* (New York: Routledge, 2020).

60. See Yuk Hui (ed.), *Cybernetics for the 21st Century. Vol 1: Epistemological Reconstruction* (Hong Kong: Hanart Press, 2024). Available at <<https://hanart.press/cybernetics-for-the-21st-century-vol-1/>>.